

An Epithelioma on the Lower Jaw.

By Dr. Robert Roessler, Hoboken, N. J.

About three years ago a young man came in my office to have his teeth looked over. When he spoke it appeared as though he had two lower lips. By closer examination a growth was seen which covered the front of all the four lower incisors and also the canines. It had almost the same color as the gum and was quite hard. It was a little movable, so that when the patient held the tumor a little forward he was able to clean his lower teeth partly. The tumor in shape was like a half of a mushroom—that is, cut horizontally in two equal parts. The stem, in comparison to the tumor, was quite small and started exactly in the middle of the lower alveolar process; we might say between the roots of the lower centrals, about a quarter of an inch below the gum line.

Asking the young man about the history of the tumor, he stated that, when twelve years old, he was struck with a slate in a school-bag on the lower jaw. At thirteen the tumor was larger than indicated in the illustration, and was simply cut off by a physician in South Amboy, N. J. At fourteen it was just as large as it was before, and a physician cut it again, paying no more attention to it. At seventeen he came in my office. I made a date with him for the operation. To secure a success I cut a piece off the basis of the stem, three times larger all around out of the gum, and

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all down to the process. As there could not be any irritation from the tooth, I was assured that there must be some sharp points on the process, and I therefore took the paquelin cautery and cauterized the surface of the alveolar process just so much as I cut out of the gum. I also cauterized the gum. The patient did not lose very much blood. I prescribed an antiseptic and about five weeks after it was entirely healed. I saw the



young man only once during the last three years and again about four weeks ago. There is no sign of recurrence. By the courtesy of Dr. C. Hoening, a physician, I obtained some microscopical sections. One of them shows that the tumor consists of nests of epithelial cells imbedded in dense fibrous tissue. It belongs to that class of epithelioma which is frequently found at the orifices of the body, commencing as small, hard nodes, growing slowly and causing metastatic tumors only at a very late stage.

Unusual Teeth.

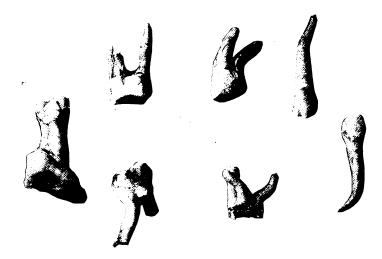
By D. D. Lester, D.D.S., Christiansburg, Va.

The illustration shows several teeth of more or less unusual shape and condition. The figure at the extreme left shows a second and third molar firmly united. As can be seen by noting the situation of the third molar, it crosses the coalesced roots of the second molar near their apices and was some three-quarters of an inch beneath the gum line when in the mouth. The union was such as to carry the conviction that the roots would break



rather than separate. It was from the mouth of a woman of fifty-five or sixty years of age. Was extracted in preparing the mouth for an artificial set, all the other teeth being badly decayed or missing. It required a good bit of maneuvering, but less force to extract it than would be expected from its appearance.

The next tooth to it in the upper row a superior molar from a mouth badly affected with pyorrhea. This particular tooth was not loose, although the gums had receded so as to expose the bifurcation of the roots;

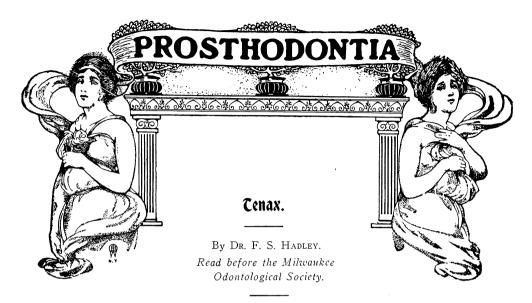


it was extracted because of persistent pain. The roots had been dissolved as shown before extraction. Male patient forty-five years old.

The left-hand tooth in the lower row, a lower third molar, required a great deal of force to remove, and part of the anterior root was left in the alveolus; no after trouble.

The central tooth in the lower row, the one with twisted roots, as also the two cuspids at the extreme right with the curved and double-curved roots, required a great degree of force to extract.

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Tenax is the commercial name—arbitrarily applied—of a material, the scientific name for which is amphybole. This substance comes to the surface of the earth through fissures caused by volcanic action; hence it is sometimes called volcanic rock. The Almighty has placed all things useful to man within his reach, it only being necessary for him to find and appropriate the various elements in whatever way they will serve him best. It is my purpose to demonstrate how tenax can be made most useful to the prosthodontist through its readily uniting with plaster of paris.

There seems to be a natural affinity between plaster of paris and tenax; every grain of plaster of paris finds a fiber of tenax between it, and its fellow grain; therefore, the two substances are united into a homogeneous mass without difficulty. Its working qualities are uniform.

Through this compounding we virtually have a new material which we will consider in the following manner, although its qualities are best seen and understood by its use. We will begin by preparing it for taking an impression as follows: To a small quantity of water add a small pinch of salt or slphate of potash. To this solution add enough tenax to make a mass about the consistency of oatmeal. To the mixture of tenax and water add enough plaster of paris to make the mixture of sufficient consistency to admit of its being easily placed in the impression tray and introduced into the mouth of the patient. After the plaster of paris has been added to the tenax and water the mixture will be first quite thick and dry, but the tenax apparently gives to the plaster of paris the water it has absorbed and the mass becomes soft.



Fig. I shows an impression taken with tenax, where all the natural teeth are in place. It illustrates how tenax can be used stiff enough to force the soft tissues out of the way. It can be easily removed, as it does not adhere to the teeth or membranes, while at the same time it takes a sharp impression.

A lift, to be placed in the impression tray, in case of a very high arch (Fig. 2), or where it is desirable to exert pressure against the roof of the mouth in taking an impression, is made in this manner: After mixing the tenax and plaster of paris rather stiff, put a small amount in the center of the impression tray, selected for the case. Introduce this into the mouth, pressing it up well against the roof, and allow it to harden; then remove and trim off the rough edges, if there be any. The impression tray is now built up ready to take the impression in the usual way.







Fig. 2.

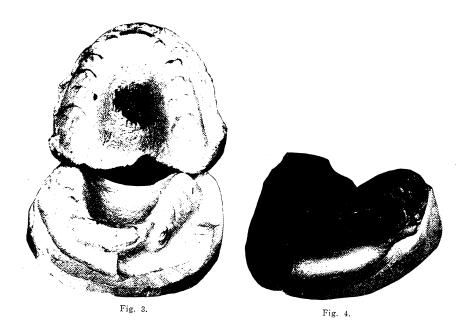
Figs. 3 and 4 show a model and impression where all the natural teeth are present, and illustrate how the model can be very easily separated from impressions taken with tenax by coating the impression with a very thin coating of liquid silax. Enough of the silax solution should be used to give the impression a slightly moist appearance. The silax solution should not be perceptibly thicker than water. Any of the so-called separating fluids may be used, but for separating impressions taken with tenax the slightest coating is all that is necessary to prevent the plaster model from sticking to the impression. For this reason the fine lines of the impression are not obliterated, and at the same time there will be no trouble whatever in separating the model, thus making it possible to take impressions for occluding purposes with tenax, such impressions having the advantage of being perfectly accurate.

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A base plate is constructed in the following way for taking the bite: Cover the model with tinfoil, then mould the tenax over the tinfoil, allowing it to

harden, giving it the form of an ordinary wax base plate, except that it should be somewhat thicker. Try the tenax base plate in the mouth and trim to the desired shape to admit of the jaws and the teeth being brought to their normal position; then place a small amount of soft wax over the occluding surface of the tenax base plate, replace in the mouth and have the patient bring the jaws and teeth into their normal position. A tenax



bite fits the mouth and the model over which it was formed, consequently there can be no change in mounting the models on the articulator. Salt or potash are not to be used in the mixture for base plates, but it is combined with plaster of paris as in taking an impression.

Fig. 5 shows a model with the base plate fitted over it. One-half of the base plate appears as it was left after the soft tenax had been moulded with the spatula and fingers over the model; the other half is carved, ready to be tried in the mouth.

The advantages that are obtained by the use of this method are manifold. In short, it is a positively accurate method from which all chance-



of error is eliminated. This method will be found most efficient in cases where the patient has lost the ability to bring the lower jaws steadily and slowly into place, as sometimes occurs with elderly people, the jaws being adjusted before the soft wax is placed over the occlusal surface. The soft wax being very thin, the tendency of the patient to bite preparatory to chewing, is very much lessened.

A tenax base plate serves as a guide to show how much, and where, the plate should be trimmed in order to admit of the free use of the muscles. After this has been done, and the jaws and teeth are in their normal position, place the tenax base plate in the mouth, and then pull the corners of the mouth down and out. Should this procedure dislodge the tenax base plate, it should be trimmed away until the muscles, as they are ordinarily used in mastication, do not disturb it. Next, place the tenax plate upon the model and outline its edges with a pencil; this line will



Fig. 5.



Fig. 6.

designate where the permanent plate should end. This method will be found very advantageous in continuous gum and metal plates, where it is not desirable to file the rim after the plate has been completed. This base plate will also serve as a guide in building out the upper lip to give the proper expression to the countenance. After this has been obtained in the base plate it can be reproduced in the permanent one.

Fig. 6 shows the palatal surface of a tenax base plate. It presents the appearance of an ordinary rubber denture.

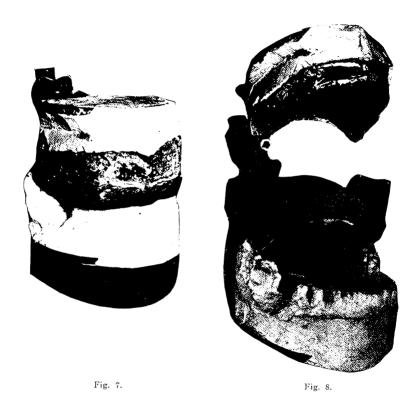
Fig. 7 shows a tenax bite placed between the model over which theplate is to be constructed and the one taken for the occlusion, ready to closethe articulator. Fig. 8 shows the tenax bite and models in position on thearticulator.

For investing gold crowns, bridges, etc., where heat is applied, tenax is prepared in the following manner:

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To a small amount of tenax add a small quantity of water. To this mixture of water and tenax add enough plaster of paris to give it the proper consistency to admit of its being easily handled. Tenax investment compound does not expand nor contract, neither does it crack under intense heat; it



is very quickly dried out, so that a case may be soldered, with the loss of but very little time.

It is readily seen from this paper that tenax and plaster of paris cover a large field in prosthodontia, and I trust that when the new qualities given to plaster of paris by the addition of tenax are better understood, that it will tend to make more accurate results possible.



Recollections of the Portland Congress.

By M. L. Rhein, M.D., D.D.S., New York, N. Y.

Read before the Central Dental Association of Northern New Jersey.

I recently spent about two months on a trip to the Pacific coast and have returned most enthusiastic as to pleasure and delight of living in that part of our country. I do not, however, mean that I would recommend it as a place for dentists to emigrate to if they purpose to make their living from their profession.

I found myself in the city of Portland where the Pacific Coast Dental Congress was to convene, about a week before it was in session. While Portland is not geographically on the coast, being about one hundred miles inland, yet it has all the natural advantages of climate that the coast cities possess, and the two weeks I spent in Portland were as pleasant and delightful as any of my entire trip, and at no place have I ever seen manifested such royal hospitality and entertainment as I witnessed in the city of Portland on that occasion.

Ethics Sustained at the Congress.

The Pacific Coast Dental Congress was almost a new venture, its members being largely young practitioners, with but little experience in bringing together a large gathering of men, and it was to a very

large extent one great experiment with them. But at the outset they insisted on strictly upholding the ethical side of dentistry, and it meant a great deal more to them on the Pacific coast than it would to any body of dentists in the east for this reason: The lines between the ethical practitioner in the east, and what we know as the advertising dental parlor men, are very well drawn, they are far more plainly designated than

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out on the coast, and the reason for this I will touch upon later. One of the rules of their congress was that no advertising men should become members or be allowed to attend its meetings, its exhibits, or its clinics; this rule was promulgated by them a few days before the opening of the congress, whereupon they were immediately notified by one of the largest dental manufacturing concerns in the country that unless their customers were allowed to come in and view the exhibits they would not exhibit. To the honor of the secretary, Dr. Chance, be it said that he at once replied that the rule would be strictly adhered to, the result being that the manufacturing company referred to practically reproduced the same exhibit that it had at St. Louis.

The membership of the Congress was between six Fospitality Compared hundred and seven hundred and no dentist who came with St. Louis. from east of the Rockies was allowed to spend a cent for membership, but found at his hotel an honorary membership ticket. I want to emphasize their hospitality because I have in mind the sort of hospitality which foreigners received at the International Dental Congress at St. Louis, last year, which called to my cheek the blush of shame on more than one ocasion. One instance I will relate. Invitations were issued for the members of the Congress at St. Louis to meet the Director General at the Missouri Building at the World's Fair, and everyone who responded to the invitation had to pay fifty cents admission! On the last evening of the Pacific Coast Dental Congress a most delightful entertainment was given to the members at the fair grounds followed by a splendid luncheon with a plate and a seat for every guest. Tickets for admission to the grounds were distributed at the meeting, but I found myself and my wife at the entrance to the fair grounds without our tickets and naturally expected to pay a dollar for admission fee. Just as I was about to secure tickets, a gentleman stepped up to me and asked if I had an invitation for the dental meeting that evening; I told him I had. He asked me to show it to him, which I did; then he asked me if I was about to buy tickets, and I replied that I was, when he at once handed me two tickets of admission. (Applause.)

Entertainment of Ladies.

I must not fail to mention their ladies' committee who entertained the women. You could not go anywhere without being covered with flowers; the coast blooms with flowers, and boutonniers were presented

to the gentlemen by the members of the ladies' committee on every possible occasion; besides that they took the ladies out in automobiles to various places of interest, while we, their husbands, were supposed to be gathered in scientific discussions.



Remarkable Attendance.

The meetings were held in an armory where, unfortunately, the acoustic properties were very bad. Notwithstanding that, the attendance was remarkably large from beginning to end, and this, too, during

perhaps the warmest weather that I experienced during my entire trip. I had the pleasure of presenting to the Congress a paper on pulp work, which was not only exceedingly well received, but remarkably well discussed by the members present. They had a symposium on oral surgical. work on the antrum and the neighboring regions that was one of the best: of its kind I had ever heard. Dr. C. N. Johnson, of Chicago, read a very important paper and the discussions were all carried on in an earnest, parliamentary way; there was aboslutely no disquieting or annyoing feature during the entire proceedings, nor was a moment of the time of the Congress taken up with any unnecessary business, all of which was transacted by the executive committee outside of the sessions of the congress. The congress was opened by an address of welcome by the Mavor of Portland, who was a physician, and they immediately proceeded to electtheir officers, electing their honorary vice-presidents from among the visitors from the different states to which they happened to belong. Dr. Schamburg, of Philadelphia, presented a magnificent paper illustrating the value of his work in radiography and oral surgery which was also remarkably well discussed, and Dr. Marshall, of the U. S. Army Service. also presented a valuable paper. I am speaking now of what constituted the cream of the papers, all of which were discussed intelligently, and the interest of the audience was remarkable.

This part of the meeting, however, did not begin to compare with the interest that was taken in the clin-Clinics. ics, and I never attended a meeting of any kind that could compare with it in that respect. Porcelain has thoroughly aroused the dentists of that region and they have a number of "Porcelain Clubs," who gave clinics together, as the Porcelain Club of Los Angeles, the Porcelain Club of Portland and the Porcelain Club of Tacoma, and thatwas, perhaps, the most unique feature of the clinics noticed by me. They had admirable clinics by some of our most prominent men from themiddle west, and especially from Chicago. Dr. Nyman cliniced on the subject of gold inlays, and his clinic table was simply surrounded by a mass of men so that he gave it over and over again, some thirty times, in order to satisfy the demand. Dr. Thompson, of Chicago, gave a clinic on the same subject, and in a way that has never been presented here in the east. Dr. Elibeck, of Salt Lake City, also gave an admirable clinic. The dental school of Los Angeles, through Dr. Wm. Bebb, had an exhibit of dental curios in the way of skulls, human and other mammals, and teeth,

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that was one of the most unique I have ever seen in the method of system and arrangement and the value it had to the dentist who cared to investigate it, and if any of you ever pass through Los Angeles I recommend you most earnestly to visit this collection. There were all kinds of anaesthetic clinics given there that were entirely novel; things that are unknown in the east, in the use of ether and chloroform by vaporizing apparatus. Some of you may know I have had some little experience on this subject and I want to tell you that I enjoyed the vast assortment of clinics concerning it on the Pacific coast. They evidently had a feeling out there concerning the comfort of their patients which illustrates the human side of the men who practice there.

Besides the clinics, and I have not begun to do justice to them, the exhibits were just as beautiful and as well worth seeing as those we are so thoroughly familiar with-and we know what the manufacturers will do in order to present their wares in the most alluring shape.

and Poor Fees.

The dentists of the Pacific coast are men of ability; Pacific Coast Dentists they are men who, man for man, are able to take their places, for the quality of their work and the value of their services, with any body of dentists I have come

in contact with in the east. But a careful investigation into the conditions of, and the methods of running, their practice revealed to me the fact that they are woefully underpaid for their services. The fees they receive are very small, and the majority of them with all their ability and skill are just about able to make a living, excepting those who speculate and make money outside of their profession. Of course, there are some exceptions, especially in San Francisco, but even there the fees do not compare with the fees that are paid in the east. The reason for this is simply that they have never gotten away from the trade attitude; instead of placing themselves on a professional basis they cling to the old trade idea of dentistry, which the older men here present know pervaded this entire region of the country even as recently as twenty years ago, and is still present to some extent, although not willingly admitted by any of us. In other words, instead of their ruling their patients, dictating to their patients, they permit themselves to be ruled by their patients. For instance, a patient will go to one dentist and ask him how much it will cost him to have his teeth fixed, and upon Dr. A replying that it will cost five dollars, the patient retorts, "But Dr. B will do it for three dollars," whereupon Dr. A says, "Well, if Dr. B will do it for three dollars of course I will." condition of affairs they have to contend with in that region, and it is not easy for them to get away from it. I felt that I would be willing to do anything if I could open their eyes to the folly of the method they were pursuing, and help them to see the difference between a trade proposition



and a professional attitude. It seems a shame that men, with the ability to follow such a profession as ours, properly and trustworthily, should put themselves in the position of a shoemaker or a tailor. That is what I referred to when I said that there was not so much difference on the coast between the ethical and unethical dentist as there is in the east. I tried to get at the bottom of this condition and I found that the main difficulty was that they felt when they started in their profession they were willing to work for almost anything in order to make a livelihood, and the difficulty now is to get a fair price for their services.

How Young Dentists Should Charge.

That is where a fatal error is made by many a young man who starts in practice, and that applies as well to young men in the east as to those on the coast or any part of the world. I do not mean by that that

I would take the position I have seen older practitioners take at times, telling young men that their price should be five or ten dollars an hour, and if these young men take less than that they are not living properly up to their position in the profesion. I have always told a man when he commences to practice for himself that, if he has time at his disposal and finds a hundred dollar's worth of work in a patient's mouth he should do that work for five dollars rather than let it escape. But there are different ways in which that can be done, and my suggestion is not to tell the patient when he asks how much it will cost, "Well, I will do that work for five dollars," but I say to the young man, "This is your opportunity to advertise yourself in a perfectly ethical way. Fix your price at what it is going to be, let us say for example five dollars an hour; you see there are twenty hours work there and that will come to one hundred dollars; tell the patient the work is worth a hundred dollars and that is your price for it; he may reply that he would like to have it done but cannot afford it, that all he can afford to pay is five dollars; then you can tell him that you are just starting in practice and have time to spare; that Dr. Jones, across the street, spends a hundred dollars in advertising and often in making statements to the public which are untruthful and undignified, but has obtained a practice by spending his money in such advertising; that you are willing to advertise yourself and will give him one hundred dollars worth of work for five dollars, but that you want him to understand that he owes you ninety-five dollars' worth of good will and the use of his influence in the community in your behalf." That is what I would advise to a young man starting in practice, in order to advance himself, rather than wait for big fees and in the meantime starve to death. We have no right to ask that of any young man just starting in practice. My plan places the patient under obligations to the dentist; as I said before, it is a form of advertising, but a legitimate and ethical form, just as much as



in the case of a physician who donates his services at an infirmary or hospital; the patients he treats there feel indebted to him and, whenever they have an opportunity, recommend him to those who are able to pay him—and that is the way for a young dentist to properly advertise himself, and he has a right to advertise if he can do so in an ethical way. (Applause.)

Every man's patients are what he makes of them when he is a young man, and the young man who starts in and places an adequate value upon his work has the respect of his patients much more than if he undervalues it (a voice, "That's right").

I heard of some most absurd dental fees in the city of Portland; yet while there I called upon a chiropodist who worked on my feet for about fifteen minutes and charged me two dollars, getting twice as much as most of the dentists in that city for his time. But the difficulty with the dentists there is that they are afraid of each other; afraid that if they charge adequate fees they will lose their patients. But they are mistaken, and for this reason: As far as I saw they are all good men, they are competent men and do good work, and twenty-five years' experience in dentistry has taught me that when one has done good dental work, if the patient is worth having, he does not want any other dentist, and money (though he does not let his dentist know) does not count with him, and he will come from miles to be treated by that dentist because he has confidence in (Applause.) He may feel that his dentist may not have the ability, the learning or the erudition of some other men, but the dentist has gained his confidence and a matter of dollars and cents will not send him to a competitor. The only patients a dentist will lose by following this course are the ones that he wants to lose, and the sooner he loses them the better off he is, and any dentist can take the step that I advise without any fear of the result.

After leaving Portland I went to Los Angeles

Dr. Marshall's

Army Dental Service

my time was spent at the Presidio; that is the park
where the United States Army headquarters are in

San Francisco, spending my time at the dental department of the hospital there; and I want to tell you, gentlemen, because I know there is not a man within the sound of my voice who does not take the deepest interest in everything connected with the dental service in the army, that there is nothing the dentists of America can feel prouder of than the Army Dental Service as I saw it at San Francisco under the direction of Dr. John S. Marshall (applause), and I only wish I could get the committees of congress and of the senate having these matters in charge to see what Dr. Marshall has done, not only in the fitting up of the different offices that he



has there for the accommodation of his patients; not only in the wonderful system of supplies and dental instruments by which the U. S. Army Dental Surgeon can travel with his corps or division and carry his entire office paraphernalia with him, but also the remarkable methods of registration of work which makes an absolutely enduring record of everything that has been done. I never for a moment imagined that so much work could be accomplished by the dental surgeons who have been appointed in the army as I saw there. And this, gentlemen, is entirely due to the work of one man, Dr. John S. Marshall, who gave up a lucrative practice in Chicago to accept the position he now occupies for a paltry salary of twenty-five hundred dollars a year. No man ever made himself a martyr to a worthy cause more than Dr. Marshall has in this respect, and, because of what he has done, his name is bound to live forever in the annals of American dentistry. Dr. Marshall has not the rank that he should have, nevertheless he is treated as an equal by many who rank above him and by the head of the Medical Staff there, and anyone who knows the conditions in an army post concerning rank will appreciate what this means, and no words that I can utter can speak louder for the value of his services than does this one fact.

I am sure if the dentists of this country had gone with me and Dr. Schamberg and Dr. Nyman and the rest of us who visited this department, and had seen what has been accomplished, they would go in a body to Washington so that next winter the bill to place the army dental service where it belongs should become a law; they would not leave it in the hands of a few dentists in the city of Washington, and I speak feelingly on this subject, because I think we owe it to ourselves and are not doing ourselves justice if we do not use every bit of our individual might and power with the congressmen from our districts and the senator from our State in order to see that this necessary thing is accomplished and that at least this satisfaction is awarded to Dr. Marshall, that he be elevated to the rank that he should hold. (Loud applause.)

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A Resume of the Cater Appliances and Materials Used in the Practice of Dentistry.

By Dr. B. F. Gray, Colorado Springs, Colo.

Read before the Colorado State Dental Association, Colorado Springs, June, 1905.

In presenting this résumé of the later appliances and materials used in the practice of dentistry, it is not so much my idea to pass judgment upon something with which I may have had little or no experience, as it is to simply call them to the attention of this Association. I have made some few tests with some of the materials which have been placed in my hands, and these tests will show for themselves, more or less favorably.

In the matter of having placed at our disposal appliances for simplifying our work, and at the same time enhancing its quality, of course there has never been a time in the history of the profession that would compare favorably with the present. Indeed our tasks are no longer laborious in the majority of cases, so well has the genius of some of our inventors displayed itself.

I still have in my dental cabinet one of the old-fashioned "hand-drills," so called, that I understand at one time had quite an extensive use. Just why the college where I received my dental education insisted that this appliance should be used by its students I could never thoroughly understand, particularly as I graduated in 1899!

I may start this list by noticing, what to me seems one of our most useful allies—namely, somnoforme.

Somnoforme is the invention of Dr. Rolland, a well-known scientist and surgeon of France, and is the result of research and experiment conducted by him along lines of the highest scientific knowledge, and covering a period of about four years. Having extraordinary merit, it did not take long to demonstrate and convince the profession of the advantages to be obtained from the use of somnoforme, and it was instantly recognized as filling a long-felt want. Although quickly taken up, the reputation thus early established, has been strengthened and made more secure with each succeeding year. The success obtained with it abroad has been duplicated in the United States, and today it is being used largely in all parts of the world.

A short study of its working qualities, and effect upon the patient reveals the following facts: This, compared with other anæsthetics, the period of induction is a very short one, averaging about thirty seconds, and that, under ordinary conditions, the patient goes to sleep without the



least excitement, seemingly, apparently, to fall into a quiet, natural sleep, the period of complete anæsthesia averaging about ninety seconds, and the elimination of the drug after the operation being very rapid the patient awakening in the most natural manner and without unpleasant aftereffects. There is no trace of cyanosis or asphyxia under somnoforme, the color remaining normal, or with possibly a slight flushing of the face.

As regards safety, somnoforme is one of the safest, if not the safest, general anæsthetic on the market today—a most important point.

The apparatus used for its administration is simple. The inhaler is light, easily operated, with no complicated parts and nothing to get out of order seriously. It is well adapted for the administration of somnoforme, filling all requirements and adding materially to the success of the drug itself. So far as I know, it is the only inhaler thus adapted to the purpose.

We may sum up as follows: Safety; quicker induction; longer anæsthesia; lack of excitement and discoloration; quick and quiet awakening; no unpleasant after-effects; simplicity and ease of administration—all of which goes to make up quite an array of facts in favor of somnoforme for dental operations.

The Buffalo Dental Mfg. Co. present for inspection the following:

For cutting, grinding and trimming natural or

artificial teeth; suggested by Dr. W. P. Smith, of
Palmyra, N. Y. These are made of thin copper, in
four sizes and two forms, flat and concave, and of
the proper temper to retain the grit. Are designed for use with coppercarbo powder, or other suitable abrasive. The edges cut as well as the
sides. They are to be kept well moistened and charged with the grit
furnished to be used with them.

Copper-Carbo Cutters, Long Shank. These are intended for cutting enamel in excavating natural teeth; smoothing cavity margins; forming cavities in artificial teeth; contouring porcelain inlays, etc. They are to be inserted in the ordinary porte polisher appliance. I have tested their facilities the and find they do what is drived for them.

merit in cutting artificial teeth, and find they do what is claimed for them, effectively.

Copper-Carbo Powder.

This, as already suggested, is the grit furnished for use with the copper-carbo cutters just referred to.

No. 10A. Crown and Bridge Articulator.

This appeals to me particularly because of its strength. It is made substantially, and is an improvement over the ordinary bridge articulators that have been long in use.

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Pullen's Crown Clamps.

For simple devices these are extremely practical and useful in the laboratory. After all, some of the comparatively simple and inexpensive appliances used in the practice of dentistry, are the most thoroughly practical.

Electric Cleansina Flux Paste.

This is a flux for hard solders. It is to be applied very sparingly, like varnish, with brush or other instrument over surface to be soldered, whether hotor cold. It imparts a bright new surface to the gold

and causes the solder to flow beautifully. Said not to check facings nor dislodge solder.

Phillips's Pulp Preserver.

This is not intended as a pulp capping or root filling, but is to be used when teeth with exposed pulps are to be filled at one sitting, and without removal of pulp. By means of pressure anæsthesia,

the pulp is to be deadened; remove it with a rapidly revolving sharp burr; make antiseptic and apply the pulp preserver, packing the amalgam filling on same, in the usual manner.

Attention is also called to the following appliances, cuts and description of which may be seen here today by those who may so desire:

The No. 6 Lewis Gasometer—an entirely new pattern; the Lewis Swager-for crowns; the Lewis Lathe Head and Chucks; the Magic Clasp Napkin Holder; Pullen's Orthodontia Soldering Clamps; the Improved Brown Celluloid Apparatus; No. 18A Whitney Flask—especially for partial cases; No. 24A Lewis Flask—for cases having deep arch and long teeth; Fibre-Faced Hammers; Prepared Magnesium Soldering Block; the Turck Spring Clamp for Closing Dental Flasks.

Sponge Cin and Cin Cement.

These preparations are prepared by Dr. Arthur Scheuer, dentist of Teplitz, Bohemia, and are sold by Gustav Scharmann, of New York.

Sponge Tin is a gray felt-like substance obtained from tin-salts by precipitation, and consists of chemically pure tin, partly in light, dust-like particles, partly in metallic fibres and scales. It is to be condensed in the cavity by the aid of large, finely serrated packers, such as solila packers. It is claimed by Dr. Scheuer that it may be mechanically united with, or welded to, any brand of unannealed sponge gold whatever, and it is his practice to use it as one might use amalgam, filling the cavity quite to the margin with the tin and then introducing gold, and thoroughly coating the filling with same.

The Tin Cement is made up of a tin powder obtained from sponge tin, and mixed with zinc oxide, which produces a powder of certain qualities that render it of value in its application to dentistry. The surface



of a filling of this material, being practically all metal, its resistance to wear and the attack of saliva is said to thus be accounted for. The originator of this material also claims for it the ability to condense or weld sponge gold into it, thus enabling the operator to fill the cavity almost to the margin with the cement, and finish with the gold. One method of procedure may be outlined, as follows:

The cavity is prepared in the same manner as for a porcelain inlay, and the impression taken with No. 30 or 40 gold foil, this being well burnished to the walls of the cavity. Allow the margins to overlap slightly. If foil at the bottom of cavity is not torn, it is to be cut with an excavator, the edges folded over and burnished to the walls. Fill bottom of the cavity with sponge tin, or better still, the tin cement, by means of which the impression is sufficiently retained in place, and that through a material which is said to combine readily with sponge gold. The balance of the cavity being completely covered with gold foil, the difficulty of further manipulation and completion of the gold filling is reduced to a minimum.

The distinguishing characteristics of this crown are shown in the position of the mortise which enumbiteside grown. gages the retaining post; the appropriate form of the post, etc. These are the claims of the manufacturer of the crown. From an examination of the samples you will note they have succeeded in producing a crown of good mold and texture. The mortise is placed near the labial face in this crown, in order to conserve material in that part of the crown subjected to greatest stress. Also, in cases of close occlusion these crowns may be ground out to accommodate antagonizing teeth to a greater extent than the ordinary porcelain crown. The posts are edgewise posts of some special alloy. A bifurcated post is supplied for bicuspid teeth.

The pubisher of the *Dental Brief* and manufacturer of dental specialties, has called attention to the following materials:

Petroid Cement, Improved; Inlay Cenment; Crown and Bridge Cement; Diamond Point Stopping; Temporary Stopping, and 20th Century Alloy.

So far as I have tested these materials (and I have tested practically all of them), they seem to fulfil the claims made for them.

As to just how practicable the ink test for cements is, I, at any rate, am unable to say. Possibly it may not have a great deal of significance; it is usually resorted to in determining whether or not these materials may or may not be impervious to the fluids of the mouth. The cements referred to withstood this ink test perfectly satisfactorily, as may be seen if desired,

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from the samples exhibited. Petroid Improved is said to have a resistance to crushing stress which is unsurpassed, and as the inlay and crown and bridge cements are modifications of the Petroid, the same may be said of them to a greater or less extent.

The 20th century alloy is well known to the profession. I have used it in my own practice with perfect satisfaction. It is rather quick setting, has great edge strength and takes a splendid finish. It is made to produce an expansion of 1-20,000 of an inch. The silver cement is made up of two materials, the cement powder and silver powder. Enough of the cement powder is used to make a very thin mix, after which the desired amount of silver powder is incorporated in the mass, the more silver powder used the nearer it approaches the appearance of amalgam, but it is not desirable to overload with this material. Following this additional cement powder may be added to secure the desired consistency. After thorough setting it is to be thoroughly burnished to bring out the silver appearance.

Ramesite Cement. From the tests I have been able to make of this material, made by H. G. Knapp, Pittsburg, Pa., I believe it to be satisfactory for general use, including the setting of crowns and bridges, as it appears to

make a hard, impervious filling.

Eukens & Whittington. This firm presents a line of instruments which I believe will prove of much interest to all who are engaged in porcelain work, namely:

A set of Dr. Reeves' Inlay Instruments, including spatula and carver; also

Dr. Chompson's Inlay Instruments.

While most of us think we can burnish the matrix in a cavity with an ordinary round end amalgam instrument or a gold burnisher, an examination of these burnishers may give a new impression as to detect we may be able to do the work with the aid

how much easier and better we may be able to do the work with the aid they may give us.

Younger's Pyorrhea Instruments.

These appear to me to be remarkably well made, and should be very effective in treating the distressing condition for which they are intended.

Ames's German Silver Spatulas. It is evident that these are not simply "makeshift" instruments; they are certainly well made, being substantial enough to allow the practitioner to properly spatulate the cement he uses. As we all

know very well, many of the spatulas offered for sale are very poor excuses, and it is extremely difficult to secure satisfactory results from their use.



Improved huev Mandrei.

This is intended to carry paper disk or stone of any size. The long screw is only threaded one-half way, which provides a smooth bearing for the stone, and a quick change from one part to another.

Attention is called to Calox, the new dentifrice McKesson & Robbins. prepared by this firm. It is gaining considerable notoriety because of the quality of the preparation in a chemical way. A dentifrice which liberates oxygen when introduced in the oral cavity, as this one I believe does, should at least meet with some consideration by the profession.

A New Automatic Cervical Clamp.

Manufactured by J. Austin Dunn, of Chicago. In construction, this is one of the simplest devices of its character I have seen. While I have had little opportunity for testing it, you will probably be pleased in examining it.

The following have been forwarded by Frink & Young, of Chicago: Frink & Young.

Bunsen Burner, with spider; Gold Annealer; Mandrels for use in cleaning teeth; Sample Wedgelock Tooth with backing; Dr. Roach's Inlay Instruments; Lauderdale-Tooth-cusp Forms and Swaging Device.

The tooth-cusp forms, it seems to me, are particularly good. They exhibit a depth and sharpness of outline that I believe will produce excellent results in crown work. The little swaging device accompanying the cusp-plate, is simple enough to meet the requirements for which it is made.

The mandrels referred to, are, as you will see, intended for use by mounting on same a short piece of small corrugated rubber tubing. Possibly some of you have already used them; I have myself, with some satisfaction.

Those who may have used the wedgelock tooth will be better able to judge of its merit than myself. However, in bridgework in the matter of broken facings, it seems to me this tooth facing would save much trying work, since a new facing may be slipped into place and cemented with little trouble.

Frederick Stearns & Co. A new chemical compound recently discovered by Prof. A. M. Clover. Alphozone. A.M., Ph.D., University of Michigan. It is an organic peroxid, to which a number of technical names might be applied. It is manufactured from succinin acid and hydrogen peroxid. It is a white, fluffy crystalline powder, being put up in tablet form. to be a wonderfully stable substance. It does not effervesce with pus.



Stearns & Co. state it to be as germicidal as mercury bichloride, 75 times as powerful as carbolic acid, 100 times stronger than formaldehyde, 3,300 times stronger than hydrogen peroxid solution (the 3 per cent) and 125 to 500 times stronger than proprietary colloidal silver salts.

Adnephrin Solution. This is also produced by Frederick Stearns & Co. It is a stable and sterile solution of the adrenalin—that is, suprarenal—active principle. An astringent and hæmostatic; also a heart stimulant.

Only a few days ago I had occasion to test this in the case of hemorrhage. The test was quite satisfactory; as much so as any preparation I have had occasion to use for a similar purpose. I believe it to be as effective as the adrenalin solution, with which we may be more familiar.

S. Eldred Gilbert sends Metallic Lining and Model Dressing and Pulp-Cap and Napkin Retainer, as representing the newer things of his output. The metallic lining referred to is a preparation of pure aluminum, recommended to prevent ill effects of rubber in contact with tissues of the mouth.

The name pulp-cap is significant enough without special comment. I have used this preparation, finding it convenient, and I think effective. Model Dressing consists of a fluid and a powder, for use in preparing models over which rubber plates are to be vulcanized.

A Nitrate of Silver Pencil.

The A. Petrof Co., Chicago. This contrivance permits of the use of nitrate of silver in any part of the dental arch with the utmost freedom. It is only a simple arrangement, but I believe practical.

The R-B Dental Needle; the Dental Sub-Q, and Randall-Faichney Co. the Imperial Syringe. These are specialties of the Randall-Faichney Co., of Boston. The needles are claimed to have polished razor-edged points—a desirable quality. They are fully reinforced, and an examination of the samples here is invited.

The Dental Sub-Q is intended for use in the injection of hydrogen peroxid, iodin, acids, etc., which may be used in treating in alveolus operations. It is said the packing in this syringe is superior to the asbestos packing largely in use, and that it is so prepared as to overcome the objection of fraying.

The Imperial is an all-metal syringe, of unusual strength and effectiveness. It is large enough to prepare several teeth for extraction at one time, and strong enough to admit of excellent results.



Paragon Anti-Glaze Disks and Strips. Made by Paragon Dental Mfg. Co., Racine, Wisconsin. This company claim their process an improvement over old methods, as they gain a more uniform and much thinner strip and disk that will

not heat, glaze or gum up as readily as when made by common methods.

I have made quite a satisfactory test of these materials, and they appeal to me as being unusually good. The strips particularly, I found unusually thin, and yet so charged with the abrasive substance as to cut rapidly. They are made in eight or ten different grits.

The Brewster Separate Dowel Crown; Stewart Carborundum Wheel and Disk Dresser; Arthur's Amalgam Carrier and Plugger; Fossume's Ivory Burnishers; Fossume's Set of Carborundum Inlay Points; the Bosworth Tongue and Cheek Holder; the Jiffy Rubber Dam Holder; the Flosspick; the Knight Glass; the Typodont.

Lee Smith & Son, of Pittsburg, I believe, has the sole agency for the manufacture of these specialties, although, of course, they may be had of the J. Durbin Co., of Denver, which firm has very kindly assisted in placing before you some of the appliances touched upon in this paper, for inspection.

The amalgam carrier just referred to is novel enough to interest all of you. It does not depend upon any "lode-stone" arrangement to carry the amalgam to the cavity; the manipulation of the instrument is wholly mechanical.

The Bosworth Tongue and Cheek Holder will be recognized as having merit, I think, as its use will enable the operator to work with more or less freedom; absorbent materials may be used in connection with it to take up the saliva, and at the same time it is so constructed as to control the tongue and keep the cheek pushed well away from the field of operation.

For simplicity and novelty, the Jiffy Rubber Dam Holder should be inspected. No bands are used in connection with it whatever.

Still another novel contrivance is the Flosspick, intended for use by the patient. Its name is significant. We often recommend our patients to make use of floss silk, and it seems to be the intention in this little instrument, to utilize this idea of the silk floss.

The Knight Glass is a double-sided mouth mirror—one side plane and the other concave. It is reversible, however. The use of the under side is suggested, for reflecting light also.

The firm whose output we have considered, also mention the Sims Hydraulic Engine, the Pyrometer Furnace and the Dunn Light, as specialties. With these all are probably more or less familiar.



Che Jiffy Cement Cube.

In connection with the above, I will merely mention this little tube, made of celluloid, I think, for injecting cement into roots prepared to receive Logan or other pin crowns. I have used them for

some months, and am much pleased with the results secured.

Che S. S. White Company.

Call attention to the following, the majority of which, through the courtesy of Mr. Durbin, may be seen here, together with the instruments, etc., already referred to:

Aseptic Rubber Dam and Napkin Holder, invented by Dr. Jose J. Rojo, City of Mexico.

Amobilis, prepared by Dr. W. H. Leak, of Watertown, N. Y. A new root canal filling.

Technic Tooth Molds, which enables the dentist to make biscuited technic teeth for experimental purposes.

Universal Scalers, suggested by Dr. Burton Lee Thorpe, of St. Louis, Mo.

Hollow Clasp Gold Crown Post, suggested by Dr. Garret Newkirk, Pasadena, Cal., who says, "It is very strong, being made of clasp metal. It is the most convenient form for attachment to inlays, over-lays, or the root-cap of a Richmond crown."

The Lane Blow Pipe, invented by Dr. James G. Lane, of Philadelphia. Designed especially for soldering regulation appliances and similar work.

Flask Press No. 3, suggested by Dr. Erastus Wilson, Havana, Cuba. Provided with long handles, to keep the hands out of the way of steam.

Broach Holder No. 5, suggested by Dr. Wm. Crenshaw, of Atlanta, Ga.

Contour Matrix No. 5, invented by Dr. Crenshaw, also.

Inlay Matrix Instruments, suggested by Dr. O. M. LeCron, of St. Louis.

Inlay Carver No. 5, suggested by Dr. LeCron, also.

In closing, I wish to make reference to the Ritter All Cord Dental Engine. Most of those present have inspected this electric engine, I believe, and the impression of it has been usually good. I have had one of these engines in use for several months, and find it highly satisfactory. I believe, for the best results, the Doriot Hand Pieces should be used in preference to the slip joint attachment.



Pyorrhea.

By Dr. E. R. VAUGHAN, Denver, Colo.

Read before the Colorado State Dental Society, Colorado Springs, June, 1905.

There is no other affection of the mouth so common to mankind, so destructive in its action, so insidious in its workings as this much-neglected disease, pyorrhea alveolaris.

Whether it is classed as local or constitutional the fact still remains, to the shame and disgrace of us all, as practical, intelligent professional men, that the effort to cure this disorder is usually confined to a superficial "cleansing."

This is our fault, gentlemen, and ours alone. My experience teaches me that there is no operation in dentistry for which my patients are more willing to pay, and pay large fees, and for which there is a greater and more constant demand than for the treatment and cure of this same much-neglected pyorrhea.

Right here let me register a protest. Do not clean teeth. Treat the gums. Remove tartar, give treatment for pyorrhea, call it by what other name you will, but discard from your vocabulary that disgusting expression, "cleaning teeth." A patient would be as much justified in asking you to clean his nose, to clean his ear, to clean his face, or any part of his anatomy as to clean his teeth. That is my humble opinion. But really, gentlemen, if we are to be classed with the learned professions, some of the crude nomenclature of our earlier days must be weeded out.

The treatment and cure of pyorrhea, I believe, are within the reach of every progressive dentist who is willing to work. The tired operator is advised to shun the work, as it is an operation not fitted to a lazy man's temperament. The most absolute thoroughness must mark every stage.

Pyorrhea is a result, not a cause, a result of Origin of Pyorrhea. neglect, always. Some little spot in the dental arch is overlooked and a minute nodule of calculus is deposited. This causes no discomfort and so remains, becoming a source of infection, a nucleus from which disease spreads from tooth to tooth until the entire denture is involved.

When such a case presents there is only one course—thorough removal of the deposit, followed by continued and careful polishing.

Instruments and Instrumentation. As to the instruments for this work, each operator must be his own judge, but he must have them so shaped that he can reach every surface of every tooth. Personally I do more work with different forms of spoon excavators, together with some form



of scaler which I may have devised from time to time as the case required, than with any of the set forms of scalers in the market.

Begin at the center of the arch and work back carefully, removing every particle of deposit from each tooth before proceeding to the next. No matter how deep the pocket or how tightly the tartar adheres; it must be removed, or failure will be the result. Educate your fingers so that when your instrument comes in contact with a foreign body, you can at once detect it. In this skill your success will lie, as you must rely wholly on the sense of touch in your treatment. Do not give long sittings. An hour is enough for any patient's endurance.

After each sitting, swab the gums treated at that time with lactic acid, full strength, taking particular care to work it down deep into the pockets. This acts as an antiseptic and as an astringent and also assists in dis-

solving any particles of calculus that may have been overlooked.

Then polish, polish and continue to polishing ish if you wish success. For this purpose I use to some extent the brushes and soft rubber points with the engine, but for the approximal surfaces the deep

pockets and the inaccessible places, a piece of orange wood in a suitable porte-polisher and held by the hand, I find more satisfactory. Be sure that every exposed portion of each tooth is fully polished before you pass to the next.

Splints. Splints. sockets, absolute rigidity must be obtained by some mechanical appliance. In my hands the permanent splint which I exhibited at the meeting last fall has filled the bill precisely. I have used it in about forty cases and it has become my mainstay in this class of work.

During and after treatment I direct my patient to use some antiseptic wash. I have for a few months past been prescribing alphozone for this purpose. It seems to be the best I have found, but I have not used it long enough to fully recommend it.

My patients are directed to return to me every thirty days for examination, and if at that time I find any deposit I remove it, and always, whether the deposit appears or not, I give the teeth a thorough polishing.

Pyorrhea pyorrhea is not a constitutional disease, and that all the drugs in Christendom will have no more effect than so much water. Pyorrhea is only curable by local treatment, and without constant care at the outset, and occasional care later on, it is bound to recur. Any dentist of ordinary ability can



treat and cure the disease, provided he is thorough and conscientious in his work, and has the co-operation of his patient. Last, but not least, his patient will pay him a larger fee, both in cash and gratitude, than for any other operation he is called on to perform.

Colorado and the Interchange of State Dental Licenses.

By H. F. HOFFMAN, D.D.S., Denver, Colo.

Read Before the Colorado State Dental Association, June, 1905.

The subject of the interchange of state dental licenses may be considered, in its turn with pyorrhea and porcelain, as the very latest fad.

Some dentists support it because they believe in it; some, in order to keep up with the times; and still others because they want to move. That the latter class constitutes the majority of the advocates for interchange of licenses does not dispose of the question.

There are many differences in the provisions of the dental laws as enacted in the several states. The only restriction placed upon the right of a state to legislate is that no legislation may conflict with the provision of the Constitution of the United States: hence, legislation is one state may rightfully differ from similar legislation in other states. The states were vested with these rights that the various localities might secure to themselves such protection as local conditions demanded. Thus is one of the fundamental principles upon which the original thirteen states united and is one of those things known as the "Sovereign Rights" of the States.

These points are mentioned merely to remind you that variations in the laws of the different states may be right and proper.

There can be no question of right or propriety if the people of any state are willing to accept and to feel satisfied with the credentials issued by other states. Neither can there be any question of right or propriety if the people of any state refuse to accept the credentials of any or of all other states, either because of their doubtful value or on account of local conditions.

The only reason for the existence of our dental laws is the protection of the public. The profession, as sponsor for and guardian of these laws should do nothing detrimental to the best interests of public protection.



Cemporary Practitioners Not Wanted.

In Colorado we have conditions which are radically different from those found in other states. Our geographical location and our climate make the state a convenient stopping place. In addition to its fixed population it is the abode of a transient army, which

numbers countless dentists, many of whom would like, for a month or two, to practice within our borders; to return for every cent in sight as little work as possible, firm in the knowledge that our beautifully equipped transcontinental trains would soon make all their cases entirely "successful."

Permanency of location, as much as any other one thing, tends to the performance of conscientious and efficient dental operations; while transitory habits are a potent factor in the acquirement of unscrupulous habits of practice.

To be sure, some good men might avail themselves of an opportunity to practice here for the summer; but we would also have with us the unscrupulous, the incompetent and the unsuccessful to shark and skin the public and to degrade our profession.

Then, also, our boards all make mistakes. While we must suffer for our own mistakes we should not be compelled to accept unconditionally the mistakes of fifty other states.

These points are not mere theories but are positive conditions confronting our state. If we ignore them we must admit an utter disregard of our only excuse for a dental law, the protection of the public.

It is to be hoped that no member of our profession will be so selfish and narrow as to offer unneccessary obstacles to the securing of a license by any honorable, competent practitioner who intends to locate permanently in Colorado. But, in our efforts and our desire to extend the welcoming hand to these men, let us not forget that we owe a duty to the public as well; that all who come have the same privileges; and that the present system eliminates a greater percentage of undesirable characters than any other system now at our command or likely to be for some time.



Some Choughts on Disinfectants.

By A. W. HARLAN, M.D., D.D.S., New York, N. Y. Read before the Second District Dental Society October, 1905.

In presenting for your consideration some new thoughts on disinfectants, I have tried to avoid the usual method of tabulating the effects of drugs, or other methods of disinfection of infected matter, and will lead up to the apex of the subject in the most direct manner.

A disinfectant is an agent (drug or other substance) that will destroy the infective power of infectious material.

The great need of the dental surgeon is an effective method of disinfecting all instruments or appliances used by him at the chair or around the chair, or in the mouth or teeth.

It is of little value to know that laboratory experiments will prove that oil of peppermint will restrain the growth of micro-organisms or their spores in the proportion of 1 to 10,000. What we need to know is that the organisms and their spores are rendered inert and incapable of infecting anything after a bath in oil of peppermint 1 to 50 or 1 to 10. Then when we use it we feel that we have done a good work.

Sterilization. In and around Greater New York, and some portions of New Jersey, we are compelled to use Croton water or water that is not much better. This is what was found in Croton water in one day, July 25, 1905 (by E. Cutter, M.D., of this city).

"To the Editor of the Scientific American:

On one day, July 25, 1905, the following are the form elements observed in Croton water in order of finding: 1. Gomphospheria abundant and throwing off spores. 2. Melosiræ, diatoms. 3. Naviculæ, ditto. 4. Cocinodiscus, ditto. 5. Arcella mitrata. 6. Gromia. 7. Anabaina circinalis. 8. Pelomyxæ. 9. Pediastrum com. 10. Oscillatoriaceæ. 11. Plagiophrys. 12. Volvocinæ. 13. Bast fiber. 14. Mumus. 15. Decayed woody fiber. 16. Coelastrum sphericum. 17. Starch grains. 18. Amorphous masses of dirt, many. 19. Plagiophrys, another variety. 20. Large cross-barred diatoms, new. 21. Pediastrum incisum. 22. Vorticella. 23. Anurea stipitata. 24. Red water fungus. 25. Large masses of vegetable epithelia. 26. Silica. 27. Amphiprora prorata. 28. Scenedesmus quadricauda. 29. Large number of double spores of alga, new to observer. 30. Staurastrum gracile. 31. New tetraspore. 32. Scenedesmus obliquus. 33. Cotton fiber. 34. Skeleton arm of a large entomo-



straca. 35. Monad. 36. Peridinium candelabrum. 37. Two-eyed Bosmina, heart seen plainly beating 120 per minute. Before this time one eye was the rule. 38. Wool fiber. 39. Smooth spicule of sponge. 40. Pediastrum boryanum. 41. Part of hydra. 42. Diflugia cratera. 43. Arcella mitrata with minute processes projecting all over like cilia. Never noticed before in twenty-five years. 44. Polycoccus. 45. Cocmarium binoculatum. 46. Difflugia crateria, another commoner variety."—Scientific American.

It is unnecessary to dwell upon this subject to convince you of the necessity of a new and complete filtration plant for New York. The City of Washington is spending more than \$3,000,000 on a plant which will have 29 units, so that each will supply that city for one day every month, and permit of the cleansing of the others. These units will cover one acre, and will supply of filtered water 75,000,000 gallons per day or 200,000,000 lbs. every eight hours. This plant was completed in September. Filtration is not perfect sterilization, but it is far superior to anything to be found in many great cities.

In France, at St. Maur, near Paris, the De Frise ozonizing system is being tried, to supply Paris with potable, germ free drinking water. This plant at present will supply only 180,000 cubic feet of water daily, which is only sufficient for the needs of a small portion of the population.

This process is almost perfect, as there were found only about 1.10 of one per cent of germs of all descriptions after the ozonizing of the Morne River water. Aerated water is always pleasanter to the taste than flat, insipid, distilled water or boiled water, as most of you know. Ozonized water does not attack iron or lead pipe or tin pipes. The only difficulty in the way of ozonizing water is the cost, for waste. If people were careful in the use of it (say forty gallons per day for each individual) it would be cheap. As it is the average consumption per day reaches the enormous total of 650,000,000 gallons for a population of 4,000,000. The cost of this quantity of water would be cheap if we took into consideration the great loss of life and time of wage earners by sickness, brought about through the use of impure water.

The United States Government* has done a good work lately, of much value to the world, in the bureau of plant industry, in studying the effects of copper on plant life. It was found that one part of sulphate of copper to 8,000,000 parts of water, was sufficient to destroy nearly all organisms in 10 to 15 hours. This has been confirmed by Jackson,† who states that

Moore & Kellerman.

[†]Science, December, 1904.



if anyone has fear of copper poisoning, he would have to drink forty

gallons of water per day to get a medicinal dose!

In a paper by Pennington, Gildersleeve and Stewart,‡ of Philadelphia, it was found that one part of copper to 4,000,000 of water destroyed the typhoid germ in from one and three-quarters to two and one-half hours. The bacillus of dysenteria and bacillus coli commini were destroyed with copper sulphate, I to 2,000,000 parts of water, after exposure of 10 to 20 hours.

The parks of New York are prone to gather a green scum on the water, bad smelling and disagreeable to look at. A few row boats were sent out, and behind each was suspended a bag of sulphate of copper. The small quantity thus dissolved was sufficient to destroy the algæ and various bacteria, without injuring the higher plant life, fishes or fowl found in the parks.

This preamble brings us to our subject for the evening. It does not matter what your system of new mode of Sterilizing Instruments. sterilizing your instruments may be now, you are invited to use another and perhaps more efficient time I have been sterilizing method. with with which has been sterilized in the following manner: Take a copper pan or kettle which is polished on the inside, and fill it with water from the hydrant. This must stay in the vessel for 3½ hours, when it is ready to use. All germs by this time have been destroyed. If you like to boil the water you can do so, but it is not necessary. For each ounce of this water add 1/2 grain of dried sodium carbonate and place all your instruments in this. They should be scrubbed and cleaned in the sterilizing water and then rinsed in another vessel and dried with pieces of cotton cloth which have been heated to 400 degrees F. in a copper box. This is easy to do now as electricity is so cheap, and is always ready for use. The French people who rent bath tubs, always place the towels in a small square box with a closely fitting lid, so that the towel is hot and ready to use. The cover for the tub, which is composed of linen, is quite hot when it is spread over the tub. In this manner, without knowing it, they provide for you a sterilized tub, and towels to use, for rubbing yourself. The French and other continental cooks, use copper kettles and saucepans for cooking, with a bright interior, as food always tastes better when so cooked. The small amount of colloidal copper dissolved in this manner acts as a complete sterilizer and hence the good taste of the food. If you cannot get a suitable copper vessel, strips of polished copper may be suspended in the watter to be sterilized, giving a larger surface for the water to act upon.

^{*} Amer. Journal, Med. Sciences, May, 1905.



Did you ever think of the filth in the waste pipe of a fountain cuspidor? A gallon of sterilized water, sterilized with copper, will make it free of smell in two or three minutes. All of the grosser instruments, such as forceps, separators and pliers, can be sterilized in this way also. The rubber dam may be washed in this water without leaving odor or taste. If you desire to filter the water before sterilizing, do it through sand or fire clay and then put it into the copper vessel. This water may be bottled and used to dilute medicines. The glass tubes used in a saliva pump should be sterilized with such water, to which is added one grain to the ounce of sodium carbonate. All of the drinking glasses, syringes, mirrors, and everything going into the mouth, may be sterilized quickly and certainly in this way. It is very difficult to completely sterilize your hands. This is what is considered the latest.

K. Vogel has been trying hot air to disinfect his Disinfection of hands. hands—already disinfected. He found that disinfection with hot water-alcohol and then corrosive sublimate, is superior to tincture of soap method, although the latter is superior in its technique. The advantages of putting the hands into a hot air box are obvious, as the hands sweat and bring out the germs from crevices and mouths of glands, so they can be destroyed even with the tincture of soap.

Some recent experiments of Kinneman, of Chicago, using an iodin solution composed of:

Iodingms.	2.5
Sodium Iodidgms.	5.5
Aqua sterilized	Γ

This is I to 100 solution.

These experiments in detail are published in the Journal of the American Medical Association, for August 26th and September 2d, and the conclusions are that for all pathogenic organism I per cent of the above combination is superior to bichloride of mercury, even in a more concentrated state. Even a solution of iodin of 0.2 per cent will and did destroy the staphylococcus pyogenes aureas and others in two minutes, while I to I,000 bichloride did not destroy the same organisms in less than thirty minutes. His conclusions are that it is easily prepared and is stable. It is non-toxic, being one-fourth as toxic as bichlorid. It does not coagulate albumen or form inert compounds with tissues. It is quickly effective, the stain it produces soon disappears. It has a remarkable penetrating power. It is really strong enough for mouth disinfection in I to 500 or even I to I,000.



Mono-Chloro-Acetic Acid.

In returning to the main thought of this paper, I desire to call your attention to the use of monochloro-acetic acid as a disinfectant for the odors, gases and poisons found in the roots of a pulpless

tooth. Its formula is CH₂CI.CO₂H. It is easily soluble in water, preferably in the copper sterilized water previously referred to in this paper. When a tooth is washed or irrigated with from five to ten per cent solution of this acid, it will soon be rendered sterile. You may seal it into the root or pulp chamber with perfect ease, as the gases of decomposition will be destroyed as rapidly as they are formed. It is colorless and will not stain. It is a disinfectant in the sense that it destroys infective material in the same manner that heat does; the mass is inert and will not repoison if allowed to remain in the tooth for a few days. If you will permit me, I will sum up in a few words my conclusions regarding disinfectants:

- 1st. The water used in the operating room for all purposes must be sterilized.
- 2d. It can be sterilized in polished copper vessels even without boiling.
- 3d. The cotton, silks, napkins and paper rolls should be sterilized in a copper box at 400 degrees F.
- 4th. All instruments are sterilized by washing and scrubbing them in the above sterilized water, by adding ½ gr. to the ounce, and drying them in a copper box, or using sterile towels, cloths, or napkins to accomplish this. They must be kept in a case lined with glass. The brushes should be cleaned and kept in glass bottles with wide mouths, stopped with cotton soaked in sterilized water and dried before using.
- 5th. The disinfectants used in or about the mouth or teeth, must be chosen for their known properties of destroying chemically poisonous matter, and pus producing organisms, as well as the animal alkaloids.
- 6th. Mono-chloro-acetic acid will do this; iodin and sodium iodid will also do it, but it cannot be used in the anterior teeth.
- 7th. A poisonous dose of sulphate of copper could not be obtained from copper sterilized water, if a person should drink forty gallons of it per day, which is an impossibility.



Porcelain.

By G. B. MITCHELL, D.D.S., Buffalo, N. Y.

Read before the Sixth District Dental Society, at Owego, N. Y., October, 1905.

The niche which porcelain has merited and won, in the dental profession, and its inestimable value, is best shown to you in a quotation from Dr. V. Walter Gilbert's Notes on Porcelain (page 9).

"A quick and effective way of ascertaining the relation and value of any article to a given subject is to imagine the conditions which would exist if that article were no longer obtainable.

"Imagine the condition of dentistry were all the artificial teeth, porcelain bodies, gum enamels, etc., destroyed and no longer obtainable. Think it over and you will be pretty thoroughly convinced that no value can be placed upon the opinion of those who say, 'Porcelain has no place in dentistry.'"

The clientele that you value most highly consist of the very people who demand percelain work as soon as they have a good idea of what it means.

Reasons for Demand for Porcelain.

The reason for the growing demand for porcelain restorations is beautifully given by Dr. N. S. Jenkins, of Dresden, Germany, in a paper read before the New York State Dental Society, in which he said:

"The preparation of a cavity, where the retention of weak walls must often seem a necessity, and where, in obscure positions, the complete removal of decay is occasionally impracticable; the frequent necessity of building up an important structure largely dependent upon fitful and precarious points of attachment, obtained by sinking retention points in sound dentin; the strain upon the patient and operator, in laboriously packing the filling in small pieces, each one of which must be elaborately pressed and hammered to obtain the desired solidity; the final horror of finishing and polishing, when both patient and operator are nervously exhausted; the misery of having an organ saved, it is true, from the immediate recurrence of decay, but announcing its rescue afresh with every touch of heat or cold, and proclaiming its past unsoundness to every careless glance by its inharmonious color; these are the considerations which have influenced and always will influence German practice." If this is true in Germany is it not also true of each and every practice the world over?



Among the numerous wise sayings of the late

Choice Phillip Brooks was one which, I will in a sense misappropriate, to bring out my belief in this choice:

"There is no nobler sight anywhere than to behold a man quietly and resolutely put away the lower, that the higher may come to him."

To this I say—as the Irishman did, who, being too lazy to say his prayers, had them printed, and each night when retiring would raise his eyes, point to the card and say: "Them, Lord is my sintiments."

Gentlemen, I am an advocate of high fusing bodies. I believe that the higher the fusing point the better. In a paper read before the Rochester Dental Society in 1904 I quoted Dr. Johnson as saying: "While every practitioner is entitled to his own opinions it may be stated on general principles that, if the operator wishes to invariably give his patients the best class of service he can do so only by using high fusing bodies."

Dr. W. T. Reeves, before the National Dental Association, said: "To Dr. Jenkins belongs the credit of arousing the interest of the dental profession to the possibilities of porcelain inlays, but to those who build their work on high fusing bodies will come the credit of the permanency of porcelain inlays."

For the past four years while associated with Prof. R. H. Hofehinz, of Rochester, it has been my good fortune to experiment with nearly all the bodies, both high and low, worthy of our notice, and the conclusions reached may aid you somewhat in your own practice.

I do not desire to tire you, nor occupy your valuable time with the routine of cavity preparation, matrix formation, cementation, etc., with which you are one and all familiar, but will skip over the porcelain field and enumerate a few new points and bring to your notice a new high fusing body.

You will, I trust, pardon the personal equation—but as the experiments and results are such the result is obvious. I do not wish to be taken as a possible spellbinder to convert you to the use of high fusing bodies. Many operators are having splendid success with low and medium fusing bodies, but

If such men as Dr. Jos. Head, of Philadelphia; Dr. W. A. Capon, of Philadelphia; Dr. Capon, of Toronto; Dr. Reeves, of Chicago; Dr. Land, of Detroit; Dr. Spaulding, Dr. Johnson, Dr. L. E. Custer, and a host of others, all leaders in their line, use high fusing bodies; there must be something in it.

If continuous gum and tooth bodies are constructed of high fusing porcelain there is some value in it. The point of superiority in the

923 Dec.



block body was its high fusion. This was its essential point. Let us see the fusing point of the tooth bodies of to-day:

Ash's tooth body22	60°	F.
Century tooth body26		
Consolidated tooth body26		
Sibley tooth body24	100	F.
Dental protective tooth body24	40°	F.
Justi's tooth body24	40°	F.
White's tooth body25		

Notice the range 2200° F.—2600° F.

If low fusing bodies (which range between 1550° and 1760°) were so valuable as their exponents claim, does it not seem to you that the consideration for its use, as a tooth body, would appeal to the manufacturer?

In the construction of the Spalding crowns are you instructed to use low fusing body? Not at all. Why? Because it has not the desired density, the requisite strength. A high fusing point increases the density, the density increases the translucency, which makes a body life-like in appearance.

Dr. Gilbert says "for the construction of certain classes of inlays the low fusing may be employed, but their range of adaptability is to a great extent *limited* by the nature of their working qualities and the skill of the dentist."

All high fusing porcelains are the true porcelains—the low fusing approaching the glass series by containing soluble salts used to lower the fusing points.

Dr. H. S. Wheeler (*Cosmos*, July, 1904, p. 549) says, "The lower you get your fusing point the nearer you come to a glass compound, rather than to a porcelain, and the greater the probability of the surface of the enamel being unfavorably affected by the fluids of the mouth."

There has been placed on the market of late a gonsolidated porcelain body of extreme high fusing point; in fact, Dr. L. F. Warren, who has demonstrated it (with others), told me it is the highest fusing body on the market. I have given it many severe trials and tests and find these many desirable points in its favor:

It has the highest fusing point of any present porcelain body, 2550° F. (The next highest being 2300° F., Close's.)

It has the greatest range of colors (see guide passed), twenty-three shades in all, nine of which are differing degrees of yellow, the most used color on any shade guide.



Gilbert says (Notes on porcelain, p. 89): "Since the advent of high grade porcelain in the *requisite* colors there has been no excuse for solid color crowns, for it is now possible to closely approximate the material teeth in their varying shades."

Its remarkable translucency due to its density—this density due to the fineness of the prepared body.

It fuses so high (2550°) it can only be used on the same manufacturer's facings (2625°), 75° less than the fusing point of the tooth body. This may be a detriment to those who cannot obtain or do not desire to use the same; but in these facings you will find the same favorable range of color, density and translucency, etc., that you do in the porcelain body.

Last and by no means, least-

It has the least shrinkage of any body I have ever tested. Exhibit matrix was filled flush and baked, with the result you can see, practically no shrinkage whatever. This is a point of great moment to us all.

Most high fusing bodies contain starch, facilitating the carving of the same, but when this starch bakes out in fusing the spaces left result in a great amount of shrinkage.

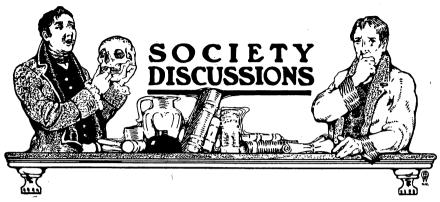
This body has lately been placed on the market by the Consolidated Dental Manufacturing Company, of New York.

In the use of this body I bake in the Price use of Pyrometer. pyrometer furnace, and as the scale indicates only 2550° F. there is no danger of change of color—due to excessive heat—as I can only go 50° higher than this (2600°), and at that point the colors have held.

You may obtain *perfect* results without a pyrometer, but a pyrometer gives us *exact* results, each time, with anxiety thrown to the winds and strain to the eyesight entirely avoided.

Plenty of experimental work before application at the chair is a necessity, not alone with porcelain, but with any other method in use in dentistry.

"Let us be (and do) our best, not merely for ourselves, but for each other; that is a noble impulse which, if it were more fully carried out, would be the world's salvation."



New Jersey State Dental Society.

Report of Clinical Conference Committee.

The Clinical Conference Committee have to offer **Dr. J. 6. Falsey.** this afternoon three cases of orthodontia; two are in course of completion and one completed, and another case of an extracted tooth, with a history, which you can all hear when the case is presented, which will be immediately after this session.

The Clinical Conference Committee, I believe, was appointed at the February meeting; that is entirely too late for any successful work to be accomplished. It was not until the first of May that I was able to get in shape letters to send to you gentlemen, requesting cases, and I was obliged to limit the time to the 25th of May in order to get on the program any case that might be sent in. This left practically but one month, entirely too short a time for this committee, from which so much benefit to the members of this society may be had. I have written to every member of the society and to many outside of the society in New Jersey and to some outside of the State and have received comparatively few replies. work of this committee is in its infancy, for so far as I have been able to learn there has been no report of it in any of the transactions. It is a committee from which great benefit may be derived. Members of the profession can bring cases here upon which they desire the opinion of others. Among the advantages you get from coming to the meetings of this society is that of getting in touch with others. If you have a difficult case and will bring the patient with you, first reporting to the Clinical Conference Committee, you will be able to get the opinion of gentlemen worthy of acceptance, which should be of great benefit to you in prosecuting the treatment to a successful culmination. I hope that this committee may be



able to accomplish much for this society in the future. There is much in the possibilities of the committee that is not appreciated. This year we have comparatively little to offer; still the cases are interesting, and I hope that immediately after this session you will go to the rear of this room where the cases may be seen.

On motion the above report was received.

Report of Committee on Materia Medica.

Dr. W. H. Gelston presented the report as follows:

The Materia Medica Committee of the New Jersey State Dental Society would beg to submit to your consideration a report of the new medicaments coming under our observation. It is interesting to note that manufacturing chemists are alive to the fact that dental materia medica is an important field. This is demonstrated by the Dental Manual of Therapeutics and Materia Medica just issued by Parke, Davis & Co.

A mild and agreeable antiseptic may be employed **Borol.** as a mouth wash and gargle in aqueous solutions. Each fluidounce contains: Sodium borate, 12 grs.; sodium bicarbonate, 12 grs.; sodium benzoate, 5 grs.; glycerin, 90 mins.; eucalyptol, ½ min.; thymol, 5/16 gr.; menthol, ½ gr.; oil pinus pumilio, q. s.

A non-poisonous antiseptic, containing the **Crystalline.** essences from thyme, eucalyptus, camphor laurel, pinus pumilio, salicylate of methyl, in combination with benzo-borate of sodium and the balsamac volatile essence of gum benzoin. It is claimed to be absolutely alkaline and efficacious in the treatment of pyorrhœa alveolaris and necrosis.

A non-toxic disinfectant, antiseptic and germicide, containing 50 per cent of cresylic acid.

Cresylone posseses the germ-killing activity of carbolic acid, but is superior to the latter, because it is convenient and safe to use. Cresylone has no action on steel or nickel, nor is its odor objectionable. It makes a clear solution with water in all proportions.

A 2 per cent. solution is valuable for cleansing the hands and instruments of the operator. A half per cent solution is very useful as a mouthwash and as a disinfectant for root-canals.

An active water-soluble principle from the Paranephrin. Suprarénal glands is prepared without the aid of caustics or heat, and hence possesses less toxic and irritating properties than some other suprarenal preparations. Another advantage is the ease with which the drug may be sterilized and combined with other principles, such as cocaine and subcutin.



A very favorable report on the paranephrin-cocaine mixture is that of M. Roemer, of Strassburg. With over 800 injections there were no after-effects, except slight palpitation of the heart in 10 per cent and some tremor of the knees in 3 per cent. Even serious manipulation, such as the removal of sequestra were painless.

The claim for this drug is, it is more stable and maintains its physiological properties longer, free from hydrochloric acid, which gives the irritating properties and renders the same unstable. It is also manufactured in soluble tablets. Physiological action, hemostatic and vasomotor stimulant. Internally adrin increases the blood pressure and lowers the pulse rate; it is also claimed to be more valuable than digitalis in heart disease.

Adrenalin-cocaine hypodermic tablet (151) (P. D. Co.) for sensitive dentine, with pressure, is said to obtund thoroughly for excavating the most extensive cavities.

A white non-hygroscopic powder which dissolves in water to the extent of 22½ per cent. The contents of eucain base is less than the hydrochlorate; 119 parts of the lactate contains as much eucain as 100 parts of the hydrochlorate, which permits the dosage to be raised.

A form of cocaine manufactured in billets of very convenient size and shape for application direct to cavity for sensitive dentine and pressure anæthesia. The manufacturers claim there is no foreign matter of any nature incorporated with the cocaine to make the particles adhere.

Dentalone. This product is a saturated solution of chlore-tone in a liquid composed of oil of cloves, oil of gaultheria and oil of cassia. The solvent powers of the essential oils here contained permit of a concentrated solution of chlore-tone (nearly 33 per cent). The therapeutic merits of the individual oil constituents will at once be apparent, as will the efficacy of the formula, as a whole, in the condition of odontalgia.

Is a preparation of iodine, with the cyanogen of iodine and other impurities (which are always found in iodine) removed, leaving the pure iodine in a condition that will immediately penetrate the mucous membrane without cauterizing, thus enabling more frequent application. Glyco-iodine can be used in all cases where the ordinary tincture of iodine would be indicated, with the distinct advantage of no discoloration of the tissue.



The importance of materia medica in dentistry is too well known to need further comment, and a thorough and concise report of the new drugs that are being pushed on the market makes it necessary, in many cases, to give a lengthy clinical demonstration to determine the value of the drug. This we think impossible with a new committee each year. Wishing to maintain in this department the prestige that the society now holds, we respectfully submit to your consideration the suggestion that three or more members constitute the committee, and at least one member be retained the following year, thus enabling clinical demonstration of medicaments, which, under the present conditions, is impossible.

Respectfully submitted,

F. L. Manning, Wm. H. Gelston.

On motion the above report was accepted.

Report of the Dental Literature Committee.

Dr. Rhome, chairman of the committee, presented the following report:

Soon after I was honored with the chairmanship of the Dental Literature Committee I commenced to realize the magnitude of the work involved. A letter from our genial president was a reassuring one, but even during my first fright I now find I had not the faintest conception of the amount of work involved in the preparation of the simplest state-The tardy appointment of the members of this committee each year is. I fear, a serious detriment to its efficiency. Many journals by that time have been thrown aside and we find ourselves unable to duplicate them. Many of the journals today keep no extra numbers of old prints; hence we are unable to secure the necessary literature. Before starting this report I wish to thank the proprietors of ITEMS OF INTEREST and Cosmos for the aid secured in their journals and the help received from the co-operation of the S. S. White Dental Manufacturing Company. We have endeavored to review all literature published during the last year and find all the articles exceedingly instructive, with a general improvement of technic in all the operations and branches. New departures in dentistry as applicable to theory or practice have been, however, comparatively few. Orthodontia we have looked upon in its new field created in the last year as a distinct and specialized branch of dentistry, and its growth has been of such magnitude that we acknowledge without shame our inefficiency to cope with the same and strongly recommend a special committee for this particular work. I also recommend the appointment of this committee to take place at your yearly meeting here, making the chairman of the old committee a member of the new committee, the two active



members to reside in the same city or locality that the work performed may have the stamp of efficiency. There have been a number of new books this year, many of them being exceedingly valuable to our practice.

Burchard's Pathology. Among the most important Pathology will always find a place, and to this new addition of Burchard's I have given a most careful consideration and made it the body of this report. A general perusal of this

book shows that it has been almost entirely rewritten, with a view to brevity and clearness. A great mass of new material has been added, while nothing of essential value in the original edition has been omitted. The book contains forty-seven pages more than the first edition, while forty-three pages constitute the pharmacological section of latter, making a difference of ninety pages of text. At the same time one hundred and fifty-six additional illustrations have been inserted, so that the actual text space has not been greatly increased. The addition of these illustrations, with a cross reference thereto is, however, a notable feature of this edition, as the value of the text is greatly enhanced. I shall enumerate some of the more salient improvements; to mention all the minor ones which are noticeable will be impossible.

The first chapter, although condensed into few pages, contains all the essentials of the original, and also gives brief but comprehensive outline of cell-nutrition and of the transformation of the physiological nutricial process into a pathological one, thus explaining the basis of pathology as an alteration of nutrition. Chapter 2, while not much changed, has been rewritten and made more explicit. Chapter 3, the relation of oral bacteria to systemic infection are more fully set forth, and the resistance of the tissues to infection fully described with many new illustrations introduced. Chapter 4, a description of cyst formation, has been introduced, and the entire subject of nutritive disturbances classified in text and by illustrations. Chapter 5, the chief improvement among the many of this chapter, deals with local disturbances of the circulation, is the admirably clear description of simple and infective inflammation in both the soft tissues and bone. The subject of arterial and venus hyperemic inflammation, the result of inflammation, both constructive and destructive, and the systematic effects resulting from local infective inflammation and the repair of the tissues after destruction, are all thoroughly but concisely treated, as befits conditions which, understood, makes plain nearly all the diseases of the teeth. Here again many an important point is illustrated by fine wood cuts. The subject of hæmophilia here introduced was not considered in the first edition. Chapters 6 and 7, pages 107 to 176, deal with the embryology of the face and teeth. The histology of the natural teeth and their relations surgically to the neighboring parts all in the most skilful



Chapter 8, pages 177 to 205, are devoted to dentition, both normal and pathological. Chapter 9, pages 206 to 245; in this chapter great improvement has been made, notably in the description of the malformation of the teeth, especially pitted and grooved teeth, Hutchison's teeth and fusion. In the last-named condition the author seems to have established a new classification. Chapter 10; abrasion is treated in this chapter in a very lucid manner, being clearly illustrated by the cuts present; under the heading of erosion the latest scientific material has been added. The chapter on mechanical injury of the teeth contains much new matter; resorption of enamel has also been added. Chapter II treats of Chapters 12 to 15 are required for the description of the exciting and predisposing causes, Pathology, Clinical History and Treatment of Dental Caries, including hypersensitive dentine. While we would like to know still more about dental caries, the manner in which the subject is presented and each point inforced by illustration, makes this portion of the book peculiarly interesting. The result of Miller's and Williams' researches all are included. The entire selection is a great improvement upon the corresponding one in the first edition. Chapter 16 is devoted to the constructive diseases of the pulp. The author emphasizes the extraordinary recuperative power of the pulp as expressed in the formation of secondary dentine, even after wide exposure, and draws attention to its results. The newer demonstration of pulp nodule formation and diagramsby the X-rays are also included. Chapter 17 concerns arterial and venous hyperæmia. The author introduces new ideas and etiology and inflammation of the pulp, mentions the resorption of dentine as one of the results. Under the heading of pulp separation the possibility of abscess formation within the pulp, after much formation of secondary dentine, is plainly The possibility of pulp infection via secondary dentine is also Fibroid and fatty degeneration of the dental pulp as lately demonstrated by Hopnell Smith has been introduced. Chapter 18; in this chapter all the existing methods of preparing the pulp for removal and the various means of mechanical removal are fully described; the uses and dangers of arsenic are emphasized by description of clinical cases. Chapter 19; in this chapter is included a valuable description of the various tests of pulp vitality and the various treatment for moist gangrene. Chapters 20 and 21 are occupied by lucid descriptions of acute and chronic septic apical pericemititis. Five pages are devoted to the complications associated with dental abscesses—namely, by infection, inflammation, neurosis, perforations, etc. Chapter 22; the author divided non-septic pericenititis into traumatic (mechanical and chemical) and auto-intoxication; also discusses ankylosis of root and alveolar prosses. Chapter 23; gingivitis is divided into marginal and interstitial (or deep-seated). The etiology is



given as either local, mechanical or infectious, or both, or general toxæmia, drug or auto-intoxication from systemic conditions, probably complicated by local infection. Chapter 24 deals with calculi in its various phases and its resulting pathological conditions. Chapter 25; the author retains the name of pyorrhœa alveolaris without the customary apology therefor, and treats it as a disease of mainly local infection. The disease is divided into two classes; pyorrhœa alveolaris beginning as a marginal gingivitis and associated with subgingival calculus; second, beginning at the margin, but not dependent upon calcarious formation. The pathology is given with clearness and is inexhaustible. Another feature of the text is the introduction of new devices for fixation of the teeth in this disease. Chapter 26; pericemental abscess is treated as a septic condition of somewhat unknown pathology, but having some association with goutiness of the patient. The abscess discharges either along the pericemental tract, finding exit at the gums or perforates the gum tissue; a calculus may or may not be associated with the abscess, and pus or gland discharge may occur. The condition finally simulates a pyorrhœic or apical abscess. Regarding the etiology the author says the question still sub judice, is whether the toxic products floating in the sluggish blood stream of the affected portion of the pericementum causes interstitial gingivitis, and an infected area from which the degenerated tissue and coagulated lymph are expelled as the contents of a gouty abscess; or whether diplococca pneumonia or some other organism enters an area irritated by the waste products and excites the acute condition; or whether the said organisms are alone capable of exciting the disease as a purely local phenomenon. Chapters 27 and 28 are devoted to reflex disorder of dental origin and infection of and from the mouth, and sterilization. These chapters are not greatly changed from the original text. The logical style in which this book is written and the wealth of illustrations make it a volume which must become a necessity to student and progressive practitioner alike.

Notes on Dental Porcelain, by Dr. V. Walter

Rotes Gilbert, is a most valuable contribution to this class

on Bental Porcelain. of literature. The first chapter is devoted to porcelain, its place in dentistry; second chapter, dental porcelain, high and low fusing; the fouth chapter, practical application of block bodies; fifth, porcelain crowns; sixth, porcelain fillings; seventh, shading porcelain; eighth, mineral stains; ninth, furnaces; tenth, firing porcelain. This book is such a happy combination of science, art and truth that soon it will be recognized as another book that we all would do well to read.



A Dental Metallurgy, a manual for the use of dental students and practitioners, by Drs. Charles J. Metallurgy. Essig and Augustus Koenig, filled a long-felt want in dentistry, and may well be placed in our dental library.

Cocal Anesthesia.

A Book on Local Anesthesia for the Extraction of Teeth, by Dr. E. Suavez, is an exhaustive treatise on the subject of local anesthesia. Dr. Suavez's treatise is a most complete contribution to the litera-

ture of cocaine in dentistry and written in such a manner as to make the reading both interesting and instructive.

Causes of Cooth Decay.

In an article written by E. S. Talbot, of Chicago, entitled "Constitutional Causes of Tooth Decay, Erosion. Abrasion and Discoloration," the writer cited a number of clinical cases where there had been

a great and rapid loss of tooth substance, owing to illness, shock and other debilitating causes. Dr. Talbot claims that the changes which take place in the pulp from constitutional disturbances modify tooth vitality, on the ground that many diseases cause faulty metabolism and neurasthenia, and that the degeneration of peripheral or nerve endings in all parts of the body is the result of some diseases. He further argues that if nerve endings in other parts of the body are affected by disease it is reasonable to believe that nerve endings, blood-vessels and connective tissues in the pulp will likewise be involved, since the pulp is an end organ situated within bony walls and a transitory structure is doubly susceptible to disease, with the loss of vitality comes caries, abrasion, erosion and discoloration.

Galvanic Creatment.

The revival of the constant galvanic current in the treatment of pathological conditions of the teeth by Dr. Huffen Dahl, of Berlin, brings to notice a comparatively new field in therapeutics. He gives a

scientific explanation of the use of electrolysis in its application to dentistry. The operation is based upon a fact that if the anode of a galvanic battery consists of platinum, it produces through electrolysis, chlorine, oxygen and ozone. If the conditions of the development of these three substances in the putrid canal be present, complete sterilization of the root canal takes place. These results have been proven by bacteriological examinations.

Studies of Enamel.

Dr. Douglass E. Caush, Brighton, England, in his paper entitled "Is There Unclassified Tissue in the Enamel?" claims his attention was first attracted to this subject by noticing the action of copper amalgam on the enamel. He further noticed that the enamel of the devitalized teeth



received a deeper coloring, and concluded that if the enamel contained no decalcified tissue this should not have been the case, as in perfectly calcified tissue there should be no action by the filling except in the exposed surface. On examination of sections prepared by permitting the tooth to remain in alcohol from six to ten days, then placing in a bath of alcoholic fuchsen stain for two weeks the pronounced manner in which the enamel spindle was stained was noticed. These were stained in the same manner as the tubuli of dentine. The slide also demonstrated a connection between the dentinal tubuli and those spaces. Further examination showed the inner surface of those spaces to have been more deeply stained, further showing the presence of the calcified tissue. Dr. Caush hopes soon to be able to demonstrate an active, as well as vital, connection between these spaces and the dental pulp. He already has established a connection apparently vital between the dental tubuli and these spaces.

Inmediate Root Filling.

In an article entitled "Immediate Root Filling," by N. A. Dewitt, D.M.D., Cambridge, Mass., we find a rather vigorous mode of procedure. The treatment is divided in two distinct parts. In the case of a tooth

with the putrescent canal the treatment consists in first thoroughly cleansing the canal, or canals, with sodium and potassium.* This is a preparation put up by Dr. J. E. Ward, coming in six small glass tubes, and any practitioner can successfully use it by following the directions. Owing to its great affinity for moisture care should be used to apply rubber dam. The few minute particles of the sodium and potassium which will cling to the barbs of the broach are sufficient to work in the canal at one time. This should be repeated again and again until a sudsy appearance is noticed, when it should be carefully washed out with water and removed with broach. Great care must be exercised in not forcing any débris through the apical foramen, as this is what raises trouble. The action of the sodium and potassium on the decomposed matter in the root canal turns all the fatty materials into soap, which is easily washed out with water and entirely removed with the assistance of a broach, and you will be gratified after this procedure in noticing the cleanliness of the root canal. The next procedure is to thoroughly dry the root canal, which is best accomplished by using a saturated solution of hydronaphthol and alcohol. The canal is then ready to fill permanently. The preparation used by the author for root fillings is as follows: The oxychloride powder and liquid; to the oxychloride liquid is added 25 per cent of formaldehyde. This completes the preparation of the liquid part of the canal filling. The part is com-

^{*}First recommendend by Dr. Schrier, of Vienna. Schrier's own preparation is procurable in this country.—Ed.



posed of 50 per cent of oxychloride cement powder, and the other 50 per cent is made up of hydronaphthol, iodoform, alum, tanin and thymol. Each of these has its special purpose in different cases of treatment which we all have, and combined make a permanently antiseptic filling. The other method is simply the removal of the vital pulp with cocaine pressure method, stopping hemorrhage, and fill with the above composition.

All of which we respectfully submit.

B. L. RHOME.

Chairman of Dental Literature Committee.

On motion the above report was received with the thanks of this society for such an excellent report, showing careful attention, great care and skilful treatment.

Report of the Committee on Art and Invention.

Dr. T. N. Bradfield presented the following report:

I have been assigned the rather difficult task of presenting to you something new in art or invention as applied to dentistry. But it seems to me that every new device and appliance in dentistry, with a very few exceptions, can be seen on exhibition here. The old saying, to which King Solomon gave his sanction, that there is nothing new under the sun, has received abundant confirmation since his day. The old historians even refer to a lost art, by means of which the ancient Greek sculptors gave color and tone to their statues, which would no doubt materially assist those now leading the investigation into porcelain inlays. Notwithstanding all this, I believe that the dental practitioner will have many novelties and great achievements to show in the near future. While it is true that dentistry has made rapid strides within the past few years, it is also a fact that it is only in its infancy. The kaleidoscopic changes soon to come in the practice of the profession will be startling.

A few years since it was a question whether or not it was requisite that the would-be dentist, before applying himself to the study of that profession, should receive a liberal education and obtain a college degree. Glancing at our program you will notice a statement, to which every progressive dentist will give his assent—namely, that all the sciences are called on to contribute to the results obtained by the present-day dentist,

The intelligent worker must progress, nor can he hide his light under a bushel; the general public is beginning to recognize the responsibilities and triumphs of the dental practitioner; the effect of this recognition will be that the chemical manufacturer will become alive to his own interest, as well as that of the general public, and will favor us in the future, as in the past, he has favored our medical brethren, with whom we are or should be collaborators. No new remedy or device is placed on the market, a full



description of which is not sent to them, by the leading manufacturers of the world, and, in the large majority of cases, this description is accompanied with samples of the goods.

The sole object of these remarks is an earnest desire to arrest the attention of the chemical manufacturer, so that, in justice to himself, the dental fraternity will receive the latest literature relative to materia medica.

J. N. Bradfield.

On motion the above report was received.

Report of the Committee on Prosthetic Dentistry.

The report of the Committee on Prosthetic Den-Dr. A. Irwin. tistry can be given verbally in a very few words. Owing to the lateness at which the committee was notified of its appointment and several consequent delays, the information was not disseminated among the members of this society in regard to the work of this committee as it should have been. I sent out, at the earliest moment possible, two hundred letters addressed to the members of the New Jersey State Dental Society requesting them to prepare and submit difficult cases in plate work, accompanied by models of the same and a brief explanation. The responses to these communications, which were sent out twice and addressed to every member of this society, were rather few. I counted altogether eight. Instead of being limited to plate work the models submitted covered orthodontia, crown and bridge work, and three cases in plate work. Some of these cases were submitted to the visitors here this morning.

I hope that this work will be carried on under more favorable circumstances in the future than it has been in the past, and that the committee may be the means of aiding members of our society who have difficult cases which puzzle them in treating them to a successful issue.

On motion the above report was received.

Report of the Exhibit Committee.

The Exhibit Committee reports progress; so far **Dr. Duffield.** as the financial report is concerned, I am unable to make that at this time, inasmuch as we are never able to settle all bills until after the exhibitors get out, and that part of it will appear in the report of the Exhibit Committee next year.

While possibly this suggestion, which has been offered by one member of the Exhibit Committee, may not meet with the approval of all of the members of this society, to my mind it is a very good one, and it is that all exhibitors be compelled to have their exhibits in place at the time of the opening session of this society, or else be refused admission. This year it



was one o'clock on Wednesday before all exhibits were in place. At twelve o'clock fifteen spaces were unoccupied, although, fortunately, all the space had been paid for. But the work of your committee was seriously hampered by exhibitors coming in promiscuously at any time, and I would very much like the society to give that matter its earnest consideration.

So far as any other report is concerned, you have a demonstration in the exhibits themselves.

Dr. Rhome. It is very unsatisfactory to have the noise of the handling of the exhibits proceeding while papers are being read or discussed; we seem to be the little end of the meeting. There should not be a nail put in a box nor the tap of a hammer until the fall of your gavel, Mr. President, has declared the adjournment of the society. (Applause.) And I hereby make a motion that such power be given to the committee, of which Dr. Duffield is a member, and that one of the conditions under which exhibitors shall exhibit is to sign a contract which will prohibit their hammering or making a noise until this body has finished its deliberations here.

The above motion was regularly seconded.

The chairman of the Exhibit Committee is really a power unto himself; he has the power to make rules for governing the exhibitors that is within its province. Last year, when I was chairman of the Exhibit Committee, I sent out notices stating that no exhibits would be allowed to be put into place after Tuesday night, and the consequence was that I did succeed in getting them all in before ten o'clock on Wednesday morning. This year they were unusually dilatory; Dr. Duffield worked hard and well and tried to have the work completed, and it was no fault of his. It is a hard matter to make exhibitors stop, but it can be done, I believe, and I think it should be left in the hands of the chairman of the Exhibit Committee, and we need not pass any resolution at this time telling him to do so. Furthermore, just at this time such a motion would be out of order, as it should come under the head of new business.

On motion the report of the Exhibit Committee was received.

On motion the above report was received, with the sincere thanks of every member of the society for the work the committee has performed.

Report of Clinic Committee.

Dr. Brinkman, of the Clinic Committee, presented the following report:

Mr. President and Gentlemen: Your Clinic Committee commenced active work at securing clinics about nine months ago, and after thoroughly



canvassing the surrounding States secured fifty-four clinicians. We endeavored to get only such as would be of special interest and instruction. The result speaks for itself. Of the fifty-four secured forty-four were in attendance, the others all sending good reasons for not appearing.

On motion the above report was received, with the thanks of the society

There being no further committee reports we now pass on to new and miscellaneous business.

Dr. Rhome.

I understand the president to say that the Exhibit Committee had the power to make the changes that I was about to refer to, and therefore the motion would be out of order.

As chairman of the Exhibit Committee, I think it would be a very good motion to have incorporated in our minutes. Personally, I should have been very happy to have had more power than that of an unwritten law along certain lines. Had I had the authority I could, if necessary, have brought the police force in here and stopped all this packing up until we adjourned. Our original intention was to continue the meeting until tomorrow noon, but as the national meeting occurs at Buffalo next week it makes it necessary for the exhibitors to move quickly. I think it would be a good thing to have a motion on our minutes stating what the actual rights of the chairman of the Executive Committee are.

With your indulgence I should be very happy to **Dr. Rhome.** make that motion.

Dr. Rhome then made his motion, which, after being amended by Dr. Meeker, was adopted unanimously, the resolution being as follows:

That the chairman of the Exhibit Committee be instructed to prohibit any one exhibiting at the meeting, unless the exhibitor be willing to accept as a condition to his exhibiting, in a printed contract, that all fixtures, etc., will be in place before the convention begins and shall remain in position until after the society has finally adjourned.

I have a communication from Dr. Cryer, of Phila-Secretary Meeker. delphia, introducing to me Dr. W. H. Williamson, of Aberdeen, Scotland, whom I met today at the hotel, and I move that Dr. Williamson be accorded a welcome by our society.

The above resolution was regularly seconded and carried.

I move that the Materia Medica Committee be hereafter appointed to serve for two years instead of one.

The above motion was regularly seconded.



Dr. Gelston. rema

If it could be arranged that one member could remain over on the committee each year it would be a good idea.

Dr. Meeker.

I recognize the importance of this committee. A similar committee on the Illinois Society has become one of the most important committees in the country,

and I would like to add an amendment that the present chairman of that committee be continued for one year from now, and that hereafter all members named by the president at the February meeting of the Executive Committee be continued for two years.

The above amendment was seconded and accepted.

The president then put the motion of Dr. Duffield as amended by Dr. Meeker and the same was unanimously adopted.

I move that the Dental Literature Committee be appointed in the same way as the Materia Medica Committee.

The above motion was regularly seconded and adopted.

I move that the same course be taken concerning the Clinical Conference Committee.

The above motion was regularly seconded and

adopted.

Morron

I should like to inquire if Dr. H. C. Register, of Philadelphia, was elected an honorary member of this society last year?

Dr. Sutphen.

Dr. Duffield.

He was.

The president announced the appointment of the following committee on the care of children's teeth in the public schools:

werrenDr. E. M. Beasley.	
AtlanticDr. E. M. Packard,	
Burlington	
Bergen	
Cape MayDr. Warren C. Lummis.	
CamdenDr. A. R. Irwin.	
Cumberland	
Essex	
Gloucester	
HudsonDr. F. C. Barlow,	
Hunderton	
Mercer Dr. C. H. Dilts.	
Middlesex	
Monmouth	
MorrisDr. B. V. Rood,	

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Ocean	Dr. A. S. Bailev.
Pasaic	Dr. R. J. Inglis.
Salem	Dr. W. A. Jacquette,
Somerset	Dr. W. F. Naylor.
Sussex	
Union	Dr. W. E. Stelle.

On motion the society then proceeded to the election of officers, the result being as follows:

President: Dr. J. E. Duffield, Princeton, N. J.

Vice-President: Dr. M. R. Brinkman, Hackensack, N. J.

Secretary: Dr. Charles A. Meeker, Newark, N. J.

Treasurer: Dr. Henry A. Hull, New Brunswick, N. J.

EXECUTIVE COMMITTEE.

Dr. J. G. Halsey, Sweedsboro, N. J.

Dr. Walter Woolsey, Elizabeth, N. J.

Dr. W. A. Jacquette, Salem, N. J.

Dr. Harvey Iredell, New Brunswick, N. J.

MEMBERSHIP COMMITTEE.

Dr. Franklin Rightmire, Paterson, N. J.

Dr. B. I. Rhome, Asbury Park, N. J.

Dr. Charles H. Dilts, Trenton, N. J.

Dr. William H. Gelston, Camden, N. J.

Dr. W. F. Naylor, Somerville, N. J.

FOR RECOMMENDATION TO THE GOVERNOR FOR APPOINTMENT AS A MEMBER OF THE STATE BOARD OF EXAMINATION AND REGISTRATION IN DENTISTRY.

Dr. C. S. Stockton, Newark, N. J.

The society then proceeded to the installation of officers.

On motion a vote of thanks was extended to Senator Bradley for the use of the meeting hall in the Auditorium.

On motion a vote of thanks was extended to the various clinicians attending this session.

On motion a vote of thanks was extended to the Mayor, the Chief of Police and police officers of Asbury Park for their efficient assistance in aiding the Registration Committee in its work.

Dr. Meeker. So that no one will feel neglected or hurt, I move a vote of thanks to any one and every one who has in any way contributed to the success of our thirty-fifth

annual meeting.

The above motion was regularly seconded and adopted. Adjourned sine die.



Central Dental Association of Northern New Jersey.

A meeting of the Central Dental Association of Northern New Jersey was held in Newark on the evening of Monday, Oct. 16, 1905. The meeting was called to order by the president and after the transaction of some routine business, Dr. M. L. Rhein read a paper entitled, "Recollections of the Portland Congress."

Discussion.

Dr. Ottolenani.

The eulogy the speaker has paid Dr. Marshall was very beautiful and very fitting. The real workers in our profession are very seldom thanked for what they do. It is not impossible that the law makers at

Washington do not know what is going on at San Francisco, and if they could understand that Dr. Marshall's work has created such profound admiration among prominent men in his own profession, it might increase their interest in the subject.

I believe there is a difference between the attitude of the army and the naval surgeons towards the army dentist. It was the army surgeon who prevented the dental surgeon in the army from having any real recognition; but the medical staff in the navy are not opposed to giving rank to the dental surgeon. The difficulty about the matter in Washington has been that the work has been in the wrong hands there; it has been in the hands of the politicians of the National Dental Association who are not working for the dental profession but for their friends and for themselves.

The doctor has given you a bird's-eye view of the dental situation in the far west and it might interest you if I gave you a momentary glance of the situation in Chicago, which is just as different from that in the west as it is different from that in New York. In New York there are numerous dental societies, in Chicago there is now but one body of ethical dentists, and they all work together in securing adequate fees for their work, and I do not think that they are getting the money anywhere else that they get in Chicago. And they need it; most of them have automobiles or fast horses, they do not use the trolley car to go home but ride behind a fast team. I dropped in to see a number of dentists, and on every door I found a sign, "This office closed on Saturday after one."

Dr. Rhein spoke of the shopping methods and comparison of prices in the west, and there is a little of that in the east too; there are some people who go into an office and inquire the price of work and then go away and take that price somewhere else and cut another man down.



A Member.

Dr. Ottelenqui.

We have something of that sort in Newark, too.

More shame for Newark! We ought to have respectable fees and stick to them, for I believe with

Dr. Rhein that the people in New York and Newark and Brooklyn will pay just as readily to have their teeth fixed as they will to have their corns cut, and we hear that it costs eight dollars an hour to have corns cut in Portland!

Dr. W. P. Richards. I would like to ask what Dr. Marshall's rank is now?

(Dr. Rhein replied that he was unable to answer that question; that he had tried very hard to secure information from Dr. Marshall, but it is unethical for an officer to afford such information concerning his own position, and whatever he had learned had been only by what he termed "a system of rotary pumping," and that Dr. Marshall absolutely refused to have anything to do with legislation concerning his position, and continued as follows):

Dr. Rhein. If Dr. Marshall has raised his voice or used the slightest influence he could have had this matter of legislation put into the hands of the right people. In my own little investigation I have found that the opinion of members of congress of our legislative committee is not one to be proud of. That is the reason why the dentists ought to take this matter up and drive out the political stench that attaches to it. One cannot use too harsh a name, for it is so unfortunate that a matter as worthy as this should be so basely managed. If the present situation continues we alone are to blame, and I want every word of what I say on this subject published throughout the entire country, so that it may reach the eye of every self-respecting dentist.

May I ask what was the result of your observation concerning the vaporized anesthesia you have mentioned?

I saw the apparatus which has been described in the Cosmos, and I have used an apparatus of that kind for some time in my office. It was claimed the one I saw there was an improvement on the one I had, and there is no question but that that apparatus will accomplish what it is claimed to do. But it has a great many drawbacks attached to it in my opinion and I believe that the same effect can be produced in an easier and less unpleasant manner. I am not at all enthusiastic about it. I had that apparatus, or one very much like it, left at my office some years ago and used it for some time and then took it down because I found that the ether odor and the churned-up condition of the dentine when you burred



it, made it an unpleasant feature in cavity preparation and I preferred other methods of anesthesia.

Dr. Ottolenaui.

It was not satisfactory then to you?

Dr. Rhein.

It was not satisfactory but I want to give it the credit by saying that it is thoroughly efficacious; it will accomplish all that they claim for it.

Dr. Meeker

I was very much interested in Dr. Rhein's reference to the exhibits at Portland. New Jersey Society we have always regarded our exhibits as a sort of a post-graduate course in dentistry where one who does not have the opportunity of visiting the dental depots very

often may be able to keep in touch with the latest developments.

Concerning the bill to give rank to dental surgeons in the army, I have a relative who ranks high in Dr. Sutoben. the U.S. Navy and who is a man of much influence and I wrote him on the subject and, after investigating the matter, I received a personal letter from him in which he said the bill would never pass because it was in the wrong hands; he said he had given the subject careful consideration and he was satisfied that the people who were presenting it were the wrong people and as long as it was being fostered by them there was no probability of its going into effect.

(Upon being asked for the name of the relative he referred to, Dr. Sutphen replied that it was Captain John W. Collins, the head of the Revenue Cutter Service of the U. S.).

The President then called upon Mr. Evans, who was in attendance at the Pacific Coast Dental Congress, who responded with a description of his trip and the incidents that occurred thereon, and incidentally paid a glowing tribute to the hospitality of the people of Portland.

He was followed by Dr. Ottolengui, who spoke in high terms of the hospitality of the members of the Canadian Dental Association and other societies.

Dr. Ottolengui was followed by Dr. Rhein, who again eulogized the hospitality of the Pacific Coast Congress.

On motion of Dr. Richards a vote of thanks was tendered to Dr. Rhein for his excellent address.

On motion adjourned.



Second District Dental Society.

October Meeting.

A meeting of the Second District Dental Society, of the City of New York, was held at the Medical Library, County of Kings, Brooklyn, on the evening of Monday, October 9th, 1905.

President Gould called the meeting to order, and a quorum was found to be present.

The Secretary read the minutes of the last meeting, which were approved as read.

President Gould then called Vice-President Hutchinson to the Chair.

President's Hadress.

It has been my opinion that the address of the President should not be so much a paper on dentistry, but should deal more directly with affairs and the conduct of our Society. This year there is one topic which seems to me more important than any other and which needs our immediate attention at this time. For the past two or three years we have held all our meetings in Brooklyn; the Second District comprises counties which are comparatively inaccessible from here and we have a very small representation from those counties at our meetings. counties to which I refer are Westchester, Orange, Dutchess, Putnam and Rockland. According to the law incorporating our state and district societies, they are formed for the purpose of improving and regulating the practice of dentistry in this State. The regulating of dentistry is largely done through the passage of appropriate laws, but the improvement of the practice can only be accomplished through the moral influence of our Society. While in the county of Kings, according to the best obtainable statistics, we have in our membership about twentyfive per cent of the practicing dentists, in the counties referred to, viz.: Westchester, Orange, Dutchess, Putnam and Rockland, we have only about three per cent.

It seems to me that the way in which we can improve the practice of dentistry is to educate the public by educating the dentist through ethical surroundings and associations, and it is time that we take this matter in hand.

We must stop for one minute and consider what it means for a man from one of these counties I have mentioned, to attend a meeting here. To reach the hall in time for a meeting when coming from one of the



faraway counties, he must cease his practice early in the afternoon; if the meeting be late and he desires to stay to the end, he must remain in New York all night, losing from his practice the time it takes him to return in the morning, and besides that, there is considerable financial outlay. It would not be practicable either, for us to hold our meetings in either of these counties, it would not be convenient for us to attend there. It seems to me that the problem cannot be solved in a way which would benefit our attendance numerically, and yet, as we are the legal representatives of this District in this State I believe that it devolves upon us to take this matter in hand and for that purpose I would ask the consideration of the members of the appointment of a committee to confer with some of the reputable practitioners from those counties and to make a report as soon as possible, probably at our December meeting, when we will only have business on hand.

The Meeting Place.

For two or three years we have held our meetings in this building and a great many members no doubt are entirely ignorant of the arrangement under which these meetings are held. This has practically

been our home; we have made it such and we have been made to feel at home, and if we had contributed to the cost of this building we could not have been treated more courteously or generously than we have been. There remains on this building a debt of thirty-five thousand dollars, which the Medical Library Association is endeavoring at this time to pay. The Association has a plan under which it proposes to sell seven hundred bonds of the face value of fifty dollars each; they will not be interest-paying bonds, but will be redeemable, a certain number each year, so that the whole issue will be paid in twenty years. As I stated before the Association has never put any conditions upon our meeting here but has allowed us to use the building as though it was our own and has taken care of our library in conjunction with its own. But we have contributed something from time to time, whatever we saw fit to donate towards the expense of conducting this building and keeping it in repair. The Medical Society at this time feels that there is a good opportunity for us to show our good feeling by joining in the subscription for these bonds and it seems to me that if we are going to continue to make this our home, as we have done in the past, we should do something to show our appreciation of the courtesy shown us. The plan in detail I cannot give you but the particulars have been printed and sent out to the members of the Medical Society and will also be sent to the members of this Society, if we so desire. The Medical Association imposes no conditions but simply presents the matter to us for our consideration. (Applause.)



Gentlemen, you have heard the President's ad-Uice-Pres. Futchinson. dress and the recommendation, what is your pleasure?

It was moved and seconded that the President's address be received and placed on file.

It was suggested by a member that action be taken on the recommendation for the appointment of a committee, but a point of order being made, the Chair ruled such suggestion out of order at this time and referred it to new business, whereupon a motion to receive and place on file the President's address, was adopted.

President Gould resumed the chair.

The Secretary stated he had no report to make.

The Corresponding Secretary presented no report.

The Treasurer presented no report.

The Executive Committee reported that it had secured Dr. Harlan to read the paper of the evening and gave the names of the essayists for the coming meetings during the season; it also reported that the arrangements for the annual meeting had been made as usual, neighboring societies having been invited to meet with this Society.

The Committee on Ethics presented no report.

The Law Committee presented no report.

It was stated that owing to the summer vacation the censors had not yet passed upon the previous applications for membership and therefore they could not be balloted for at this meeting.

Dr. Harlan then read his paper.

Discussion of Dr. Harlan's Paper.

At the conclusion of the reading of his paper Dr. Harlan continued as follows:

I have here a twenty-five per cent solution of hydrogen sulphide which was made to-day and in another bottle the one to one hundred solution of iodin and sodium iodid in sterilized water.

Also some mono-chloro-acetic acid, the formula of which I gave you. It is an absolutely colorless crystal which is perfectly soluble in water, and on account of its loose connections will break up easily and when it is thrown in contact with hydrogen sulphide (which you can probably smell all over the room), will soon destroy odor. The gases which are found in pulpless teeth are usually hydrogen sulphide and phosphoretted hydrogen and those are the most penetrating and subtle and disgusting odors that you are likely to meet. The iodin solu-



tion in about two minutes will destroy any of these gases and mono-chloroacetic acid is so quickly broken up in the presence of these gases that if you place it in a tooth that has just been opened in about two minutes it will be completely free from any odor, and if you place some of it in a shallow vessel, five per cent, within a few feet of the chair, all of those odors will in a short time be concentrated in that water which is ready to receive them, so that you can disinfect the room you are working in by means of this solution in a short time even without opening the window. When you have been using your instrument in a putrid root canal or any vile-smelling place, if you take some of the copper sterilized water and sodium carbonate you can easily disinfect all of your instruments in an extremely short time, and without the necessity of heating the water. Heretofore we have always been taught that all of the water we use must be boiled 100 degrees C. or 212 F.; but that will not destroy infection in itself while the mere fact of bringing Croton water or Schuylkill water or Potomac water or Chicago water in contact with a highly polished copper vessel dissolves a certain quantity of what is known as colloidal copper and destroys all of the organisms and organic matter so that you have a perfectly sterilized water.

The work that has been done by Moore and Kellerman in this particular with reference to growing plants in water, under the instructions of the U. S. Department of Agriculture, has been and must be of incalculable value to the inhabitants of the United States. Everywhere in streams, in small streams especially, where, after rain, all of the dissolved and decaying and powdered material that comes from decaying vegetation and dead animal matter is washed into the water; when that goes into the water the first thing that you do when you taste it is to find that it tastes very good, but as a matter of fact that is the poorest test for water because the salts and the residue from the decaying vegetation and the fungi, etc., are all dissolved in this water. If you can precipitate the poison of the living organisms and the products of the living organisms in the water by placing it in a copper kettle or bucket or saucepan or any such vessel which is highly polished so that you can get pure drinking water and water that will not give you any intestinal or any other disease, brought about in that way, then you have done a good thing and it is something that you can apply directly to your practice.

If you take a glass dish having no abrupt corners and which is perfectly smooth on the inside and put some of the copper sterilized water in it and add some of the dry carbonate sodium in it and dip your instruments in it, and after they have been scrubbed and washed, etc., take them out and put them in another vessel like this (indicating) and take



some towels or cotton or linen or hemp or any other substance of that kind that has been dried in a copper box, sterilized to 400 degrees, you can wipe those off and put them away and next day they are ready for use. In the process of doing this you can put your hands in the copper box and sterilize them before you begin or sterilize the hands of the girl that does this and you can have a completely sterilized set of broaches, excavators, chisels, separators, files and everything that is likely to be wanted.

With this simple method of disinfecting instruments and teeth you have something which is really superior to anything that has been brought before the profession up to this time, and which has not so far been brought before the medical profession, because the work of Moore and Kellerman and the work of Jackson and Pennington and Gildersleeve and Stewart has all been addressed to other phases of work, so that this is the first time that this matter has been brought before any dental society and you can see yourselves how simple it is. With a little copper bucket polished with United States metal polish or any other polish you like, so that it is clean, then pouring the Croton water or the water you get in Newark or at any other place where it may be more or less contaminated and leaving it there for three and one-half hours, when it is absolutely sterilized without boiling, I submit to you whether that is not a simple, easy working, practical method for any dental surgeon to use at the present time.

I wish to thank Dr. Harlan for the thoughts he

Dr. E. B. Babcock. has brought out. I have been very much interested
in the articles that have appeared in the public press
concerning the clearing of our lakes by the use of sulphate of copper.

I would like to ask one or two questions of Dr. Harlan, and the first is how long that copper vessel would be effective, how frequently would it have to be scrubbed out to bring that colloidal copper to the surface?

Another thing is with reference to the water being taken internally. It was said that even if we took forty gallons a day we would not get enough for a toxic dose, but yet it is a well-known fact that many drugs are cumulative in their action on the system and while we would not get enough in a day or a month, we might in a year or two get enough for a toxic effect.

There is another thing I might suggest and that is the use of alum, aluminum, potassium sulphate; what would be the effect of that in precipitating the various ingredients found in Croton water?

I would like the doctor to repeat once more the iodin solution that he suggested.



I will answer that question at once. The copper must be repolished every time after use, because there is only a certain quantity which is dissolved when water is brought in contact with it and that is sufficient to precipitate the animal matter and the organisms and destroy them.

The iodin solution is composed of iodin, 2.5 gms., sodium iodid, 5.5 gms., aqua, sterilized 250 cubic centimeters, which is equivalent to about eight and one-quarter ounces. I will show you the color of that in the proportion of one to one hundred, but that could not be used very well in the anterior teeth on account of the difficulty in removing the stains, but it is useful in sterilizing the hands, etc. (exhibiting mixture in bottle), when that is brought in contact with hydrogen sulphide it destroys the color of iodin which you know can be destroyed by ammonia and other substances which I need not mention.

' I did not mention anything about aluminum; you will remember there is not any alum or aluminum in any of these processes.

Dr. Babcock.

I was only speaking of the sulphide because that has been used sometimes.

Yes, it has been found, as I stated in my paper,
that one part of sulphate of copper to eight million
parts of water will destroy the various organisms that
are found in Croton water, for instance, and in Schuylkill water, and
Potomac water, and St. Louis water, etc.

Sulphate of copper is used as an emetic in the proportion of three or five grains. Once in a while, if a person is sufficiently susceptible, three grains may prove poisonous, but if you will take the trouble to figure out the proportion of sulphate of copper in one part to eight million parts, you will see how long it will take to make three grains, and if the average person is in the habit of drinking five pints of water in a day, which is really more than he does drink, you will see it will take him about two months to drink forty gallons.

Dr. LeRoy. If Dr. Harlan in closing the discussion would tell us how the application of these crystals might best be made in the pulp canal I think it would give us an opportunity of working a little better than we could if we merely made an application of the drug in any way that we might feel inclined.

I desire to pay my respects to Dr. Harlan. I feel

Dr. Charles A. well repaid for coming over tonight, as he has

brought to our attention a new colorless antiseptic

for the teeth and that is well worth coming over to

hear about. In fact, Dr. Harlan always presents something new in the



line of chemicals. I came over with a number of Jersey men tonight and we had dinner in New York, where one of our party drank five glasses of water, and Croton water at that, and he must have a terrible coating to his stomach by this time—I am glad I stuck to whiskey. (Laughter.)

But I want to pay a tribute to Dr. Harlan for what he has done for dentistry in former years and is continuing to do at the present time. I have been to his office many times and have received many hints that have done me good; I have been well repaid for coming over here in getting his clinical knowledge of the drug mono-chloro-acetic acid for sterilizing the roots of the teeth.

Dr. J. B. Hanning.

I feel personally indebted to you, Dr. Harlan, for coming here tonight. I feel you have made such a profound impression upon this audience that they are speechless; they realize the value of what you have

told them and are absorbing it, but they are speechless. And I can scarcely find words to express my thanks to you. I feel that a new field has been opened to us, that we are further advanced. There is nothing more serious than the use of antiseptics and if we can get the results Dr. Harlan has told us about tonight, it will certainly be very valuable to us.

I have heard of surgeons who used a four per cent solution of formaldehyde for sterilizing their hands and after some time actually lost their finger nails from the effects of it.

Dr. Ferris.

I would like to ask if it is necessary to keep the inside of the copper box used for dry sterilization, polished like the copper kettle.

It is not. (In reply to a question from Dr. Ash.)

Pr. Harlan.

You can take an annealer and put in the box and you get the necessary degree of heat; take a copper box 12x10, 12x18 or 12x14, 6 inches deep, and put in your towels and napkins and everything else and it is all completely sterilized by the operation.

The sulphate of copper I am familiar with in de- **Dr. W. D. Provost.** stroying the algæ in a great many of the lower forms, but I was not aware that it would destroy all pyogenic organisms, and I would like to ask if that is so? As I came in late I possibly have missed hearing that point explained.

Dr. B. E. Perlie.

I would like to ask the doctor the percentage of the acid solution.

The percentage of mono-chloro-acetic acid for the destruction of gases, poisons, etc., is mentioned in the paper as from five to ten per cent.



With reference to the gentleman who spoke about sulphate of copper. Sulphate of copper stands low in Sternberg and McFarland and other writers on pathogenic bacteria, but I speak of colloidal copper in destroying organisms in water and when we destroy a streptococcus we use the iodin solution or the mono-chloro-acetic acid, but the sulphate of copper or the colloidal copper is to destroy the organisms found in the ordinary water furnished for drinking in all the various cities of the world, and it has been found, in all the intestinal diseases of the human race, in the last few years, that copper seems to be the best intestinal disinfectant, although previous to that salol soziodol and substances of that nature were supposed to be even better. If you take a person who has been exposed to the germ which produces typhoid, no matter what it is, copper will destroy it. Pennington and Gildersleeve and Stewart found that one of the organisms which produces dysentery and the organism that produces typhoid and the bacillus coli communis found in the intestinal regions are all destroyed after an exposure of from ten to twenty hours to copper sterilized water. It is such an easy thing to take any kind of a copper vessel, which, however, is rather hard to get in New York because you will find that nearly every copper vessel is lined with tin or silver or zinc or something of that kind, and my friend Dr. Siebert had to go and almost injure a man to get a piece of copper so that he could get a perfectly polished surface. However, we will soon get them if we demand them, but on Broadway, near 22d Street, where they sell sterilized coffee pots, they are all lined with silver and the silver does no good whatever. This vessel I got on Wooster Street, and it is not the only one I have. It is a place where they sell cooking utensils made in France, and they have all kinds of pans, but most of them are rough and not polished, and you want a perfectly polished interior, but it is very easy to get that with your lathe. You can put an old hat on the lathe and polish the inside of the pan without any difficulty whatever. If you only get a gallon of the water that is all you want in a day. Now that is the primer, that is where you begin—with the water. You can run all the silk thread through there you like. How do you know if there is infectious matter when you take a dozen spools of silk thread coming from any concern handling them. They are all covered up with wax. Every bit of silk or bandage of any kind used in my office I put on the mandrel of a lathe and unwind it and wind it back again on the spool so that I have sterilized silk. I do not care about drawing that between peoples' teeth, not knowing but that somebody with tuberculosis or syphilis has been picking his ears or his nose or running his hands through his hair before giving me that silk.

It is such a simple matter to handle these things that it is a wonder to me people have not done more about it than they have. In my office



I have a surgical table with three shelves. On the bottom one is a large pan, in the middle one is another, and on the top, a smaller one. When I get through with the instruments, if I have used them where they have come in contact with blood or mucous or anything that may be infected, I put them in a dish like this (illustrating), which is half filled with sterilized water; the dry sodium carbonate, which is so easily soluble in water, is added in the proportion of half a grain to the ounce, which is quite sufficient. Those instruments are all scrubbed with a clean brush and then put in another vessel containing some more of the same fluid, where they do not have to be scrubbed, and then they are wiped with sterilized cotton or toweling, whatever it may be, and put in a box.

The copper box you can easily have made, and you can have that perfectly polished, and when you get ready to heat it up with your gold annealer or a 32 candle power lamp turn on your current and put in your instruments or anything you have to sterilize and run it up to 400 F., and everything is sterilized. Those of you who have formaldehyde generators or other generators always find a great deal of difficulty about handling them.

Now if you will let me recapitulate these on my fingers I will say:

First: You have water—I don't care where it comes from.

Second: You put it in a polished receptacle of copper that is clean, to begin with.

Third: You let it stand there three and one half hours and then decant it off.

Now you have the first primer finished; you have the sterilized water, and now you want to completely sterilize your instruments.

You either use dry sodium carbonate or this iodin solution, first proposed by Dr. Nicholas Senn, one of the most eminent surgeons of this country, and followed by Dr. Kinneman in the University of Chicago Medical Department, Rush College, who stated the effects of this solution on all the various organisms and counted the number of minutes and seconds, etc., required to destroy them, to restrain their growth and absolutely annihilate them. It is all right to use where you do not want to stain your cuffs or your hands or the interior of the teeth.

With reference to the mono-chloro-acetic acid, I claim the credit of having presented that myself. The mono-chloro-acetic acid is effective in the proportion of five to ten per cent in solution, but if you want to peel off a little piece of the crystal and put it inside of the pulp chamber and slightly moisten that with some of the sterilized copper water and cover it up, you will find that the next time the patient comes to you the odor has entirely disappeared. In those cases where there is a fistula leading from



the apex of the root out to the gum, or in the nose or behind the palate or somewhere, those gases pass off in that way through that fistula, but this is a place where the apical end of the tooth is sealed by the tissues beyond it, and you want to get rid of that odor.

I know of a great many things that have been proposed for that purpose, but as I said in my paper in the beginning, I do not care to go through the list of drugs. You can read of all these in Allison's book on disinfectants, or McFarland or Bowhill or Magnim or Sternberg or anyone else who writes on that subject. You do not need so many disinfectants, you only need a few and you want those that do not stain the tooth when you are using them in teeth, and you want those which will not irritate beyond the apex of the tooth when you do not want it irritated. When you do, then use something which is irritating because you know it will irritate. You want something that will destroy gases and poisons and the poisonous results of decomposition of animal matter within the tooth and the mono-chloro-acetic acid will do that and the iodin solution will do that.

There is no doubt about that. You take a little bit of hydrogen sulphide (illustrating), that is a sufficient quantity; just as soon as I add a proper quantity of the iodin solution (experimenting), it not only destroys the iodin odor but the iodin destroys the odor of the sulphide.

If you put carbolic acid or anything like that into a tooth which contains sulphureted hydrogen you smell the odor from the sulphureted hydrogen, but when you take it out the next day you will smell the carbolic acid. But in this case the mono-chloro-acetic acid breaks it up chemically and destroys the poison and does not irritate.

(In answer to a question.) If you open a tooth that contains a putrescent pulp and there are discolorations there from the blood globules, etc., if you leave that open to the saliva and air, etc., that tooth discolors; that is one of the things almost certain to follow; if you exclude sodium and wash that with a solution of five to ten per cent of mono-chloro-acetic acid, the second time you see that patient when you take the dressing out, that tooth will not discolor because the coloring matter that is in the decomposed blood globules, etc., has already been destroyed so that it can be washed out, and is washed out so that your tooth does not discolor. But if you put the iodin solution in, that will discolor and fix some of the coloring matter so that it is almost impossible to take it out without the use of some substance which is more or less deleterious to the tooth.

Dr. Babcock.

You use, I suppose, the carbonate of soda for the purpose of breaking the fat globules.

Dr. Harlan.

The carbonate of soda itself will so effect fat, but only to a small extent.



Dr. Babcock.

I wondered if there was any other function. I noticed that you added it to the water.

Dr. Harlan. I added it as a sterilizer; it is poisonous to anything that colloidal copper is not poisonous to. It is not contended that colloidal copper will destroy the pus producing organism because that is not found in ordinary drinking water. But the various organisms that are more or less poisonous to the human economy it will destroy.

Dr. Babcock.

The carbonate of soda which is ordinarily found in the market as washing soda, is that sufficiently pure?

Well, I do not know. I use it chemically pure, and dried at that, so as to be certain of the disinfecting property.

On motion a vote of thanks was extended to Dr. Harlan for his very excellent paper.

On motion adjourned.





Certain lines of human thought become so rooted in custom that nothing short of an intellectual cataclysm can remove the weeds from the mental garden. In a sense it may almost be declared that man's ideas are largely congenital. The son of a Baptist is a Baptist. The son of a Democrat thinks himself a renegade if he vote for a Republican president. In like manner routine modes of work continue through generations, and he who dares to suggest that the method is wrong is promptly condemned for heresy.

Antiquated Educational Methods.

If we imagine the first school, and the first lot of pupils that ever studied in concert, we discover the origin of class work. This initial class, at the end of a year, finding there was more to learn, continued study. A new class applied for admis-

sion to the school, and naturally were compelled to begin where the first class had begun a year previously. Thus the class system of schooling was inaugurated. Later, as the stock of learning increased the terms



of tuition were lengthened and the number of classes augmented, until finally we have the kindergarten, primary, grammar and high school, the college and the university. In spite of the tremendous advance in pedagogical methods, and the increased intelligence of teachers, the ancient class system and specified periods of study is still maintained. The postulate seems to be: "In the peck of knowledge needed to obtain a diploma there must be four quarts, and each quart must keep you in school for one year."

Measured by this logic, at first there were but two quarts of knowledge to the dental peck; latterly there have been three, and four is widely demanded. Evidently the dental peck must be as large, and take as long to fill as that of any other institution of learning.

The Argument of the Heretic.

Occasionally a man has arisen with courage to declare against the system. Such a man of course is a heretic. But the Heretic is a stubborn beast, and commonly a surprisingly logical fellow. Some

of his arguments are hard to answer; therefore they have been left without reply. But the system has been unchanged. The Heretic says: "Why should you compel a man to stay at college three or four years, if he can pass your final examination test in two?" The answer is prompt: "It is the rule." "But why such a stupid rule?" persists the obstinate Heretic. The reply is silence and a glance of pity.

The Heretic tries again: "If it requires only four years to teach a young greenhorn both the theory and the practice of dentistry why should it also require four years to teach theory alone, to a successful practitioner, who began without the advantage of a diploma, and who may aspire to have one?" Answer: A shrug of the shoulders.

In other words there is no logic in the contention. It is simply the rule; so many classes; so many examinations; so many months; then, and not till then, the final test, and the diploma. The logical argument that if a peck of knowledge merits a diploma, the man should have the diploma whenever he can successfully fill the peck, is ignored. Congenital lines of thought; habits of generations; arguments of the unintelligent majority, all unite to uphold and retain an antiquated and unjust method of fitting a man for dental practice. If the stupidest man in the class can earn a diploma in a given number of months, it is a manifest



injustice to compel the brightest classman to remain at college till that stupid fellow is manufactured into the finished product.

Che Courageous Example of Columbia University.

The above, of course, is rank heresy, but the editor has been heretical along these lines so long that the ideas do not shock him, however much they may shock others. Just now, however, a powerful factor for reform has been found. No less im-

portant an institution than Columbia University announces the abandonment of classes and terms of study. Hereafter there will be no Freshman, Sophomore, Junior nor Senior classes. The price of a diploma is to be 124 points. Each branch of study is to have its equivalent number of points. Examination in any branch may be had at any time, and the points if gained, credited to the student's account. When his score is 124 his diploma will be granted. In other words, whenever the student can satisfy the faculty that he has his peck of knowledge his degree is granted. The race horse will no longer be retarded by tethering with a cab animal.

The Count System in Dentistry.

Why cannot this system be established in dental schools? Truly there is no sound argument against it. It will be said first and foremost, that a man should have long training to acquire the manual

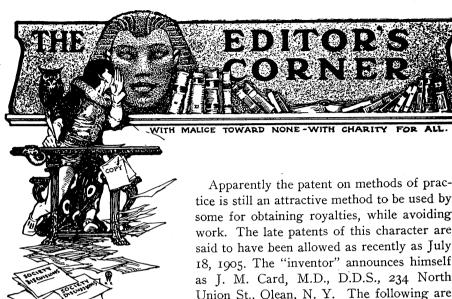
dexterity alone, which he must have to practice dentistry. To this, the best argument that will be brought forward, the answer is simple. What may be true theoretically in relation to the teaching of a class, may be entirely false in regard to exceptional individuals. If the teachers can establish a test which will accurately measure the manual dexterity needed for dental graduation a specific term of study and application is unnecessary. Whenever the man can satisfy the test he is entitled to his counts. By such a system there would be no injustice done to any; the measure for all would be equable. Length of time at college would depend upon a man's industry and ability. Applicants with previous knowledge would be justly treated. An old practitioner of dentistry might matriculate, and pass all practical examinations at once, gaining credit for the allotted number of points at the outset. He then could devote all his time to the acquirement of the scientific theories, which was his primary object in attending college. Contrarily the medical graduate might, at his entrance,



obtain all the points for medical knowledge, and then devote his time to the infirmary where he would be learning what is strictly dentistry.

Why should not some one of our great dental schools follow the grand example of Columbia, and break away from conventions? Why not have a real peck measure for a peck, and use it? Why not?





from Dr. Card's Circular.

tice is still an attractive method to be used by some for obtaining royalties, while avoiding work. The late patents of this character are said to have been allowed as recently as July 18, 1905. The "inventor" announces himself as J. M. Card, M.D., D.D.S., 234 North Union St., Olean, N. Y. The following are extracts from his circular:

If this printer's ink can make you think—that is, if you have a thinker—then the deal I give is a sure go. No man of brains can pass it by; it is a deal to catch the mind and eye, and when you use it once you'll never say to it good-bye, for it with you will

stay until you die.

It is a live proposition—the twentieth century way.

Stop a moment; every dentist in the land within a few years will use these simple yet wonderful inventions. Wonderful revolution.

Stop! Look! Listen! Can you hear me whisper to you? Attention, please. Behold all things in plate work have become new. When your teeth are articulated your plate is made. What more could you ask? No labor in flask. No running of material into pink gum. You can make a plate as artistic as you wish. You have perfect control of your material and wherever you place it, it will remain. All you do is plainly in sight all the time. You can produce a great variety of pink gum shades, or you can use by this invention the ordinary pink rubber—the one a semi-pink, and either can be placed in two minutes. You can make your plate in three minutes. . . . I am trying to impress you with great facts that are worth a thousand dollars to any dentist. Every line in this is written on honor. Only a few of the good things are mentioned which are fully explained in book of instructions. If not already sold, I also sell the ex-



clusive use of patents for your town or city where you can control it. To those who respond at once, the price will be \$10, \$5 cash and balance in sixty days or \$8 cash, as soon as order is received I will send your book of instructions, a certificate for use of all my inventions that you could frame if you wish. Three plates, one a partial plate, a full plate, and a metal plate which will show you every detail. The book of instructions contain the process of making eight different plates all but one the rapid process, you can make your own pink gum color. Your plates will be uniform in thickness. No surplus material and very little work polishing. The systems are all one could ask for. You will have no trouble making these plates, and will never be offered this proposition again at the above price. Now is your opportunity.

J. M. Card, M.D., D.D.S., 234 North Union Street, Catt. Co., Olean, N.Y.

In response to this alluring circular, and desiring if possible to give his patients the advantage of the wonderful processes, a certain dental practitioner invested. In a letter to the editor he writes, "You will probably conclude that I should not have been so easily taken in—and I plead guilty to having too much confidence in my fellowman's being as honest as I am, but confidence is the basis of nearly all our business transactions. I would not have invested had it not been for the testimonials published."

This is a hint to dentists who lend their names to advertising circulars. At the end of his letter the Doctor says: "At the time, I appreciated highly your exposure of the method of pressure anesthesia that some mountebank was selling for \$25 several years ago."

In exchange for his cash this dentist received a license, copy of which is published below, and the "book of instructions." This "book" comprises eight pages, each about two inches by three inches, in size. Dr. Card announces that his "methods" are covered by patents, but as he has overlooked the formality of taking copyright on his "book" we reprint it for the benefit of our readers who might desire to know what they are paying for before taking out a "license" from Dr. Card.

LICENSE WITH ROYALTY. (Three Patents Allowed.)

SHORT PROCESS COMBINATION DENTURES.

This agreement made the third day of October, 1905, between J. M. Card, M.D., D.D.S., of the City of Olean, County of Cattaraugus and State of New York, party of the first part, and Dr. * * *, party of



the second part; Witnesseth, that whereas Patents allowed of the United States of America for the above inventions and whereas, the party of the second part is desirous of manufacturing and using the same, now therefore, the parties herein mentioned have agreed, as follows, viz.: For the following consideration the party of the first part hereby licenses and empowers the party of the second part to manufacture, use and sell the same, subject to the conditions herein named, at his office only in the City of Somerset, County of Perry and State of Ohio, and at no other place or places, for end of the term herein written and mentioned. For and in consideration of the sum of \$8.00 paid by the said second party, the first party licenses the second party to the use and sale of all the inventions now protected at the patent office at Washington, D. C., by him for the term of 17 years from the 18th day of July, 1905, until the 18th day of July, 1922, when this license ceases and ends. In witness whereof the parties above named have hereunto set their hands the day and year first above written at Olean in the County of Cattaraugus and State of New York.

J. M. CARD, [L.S.]

PATENTS ALLOWED JULY 18, 1905.

The contents herein are your individual office rights, for your own use only at your one place of Book of Instruction. business and none of the processes can be used by another from this book or otherwise. These systems are my property only as I dispose of their use individually in each case for the office of said individual. If purchaser violates this agreement he forfeits all of his rights therein. Systems are protected and caution any infringements of same.

Respectfully yours, J. M. CARD, M.D., D.D.S.

When model is on Articulator coat it with Liquid Silex, hold over heat for a few seconds, then apply a thin coating of rubber solution, which is made by dissolving ordinary dental rubber in Chloroform or Bisulphide of Carbon, then take a sheet of waxable rubber, heat it in water or over a flame and when warm draw it out very thin by carefully stretching it both ways, the thinner this base the better. When slightly warm press it in roof and draw it over the alveolar margins and labial surface of model and press it to place, using extra heat over flame. Then trim to shape of plate required. Use waxable rubber to connect teeth to this base by taking

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small pieces and pressing it into the pins in tooth first, then heat and press tooth into its place on the alveolar ridge of the waxable rubber base. (In articulating teeth use plenty of waxable rubber so as to hold tooth firmly in place with finger and thumb pressure.) Then with warm spatula trim off the surplus so that the next tooth can take its proper position. When teeth are articulated cut away waxable rubber down to the pins in teeth and apply a sheet of ordinary dental rubber over the whole lingual surface after slightly warming it. (It is good practice to apply a thin coating of rubber solution around the teeth and fill the interstices with same before applying the ordinary dental rubber sheet as it makes it adhere tenaciously to its place.) Then take any suitable instrument and trim off the overlapping surplus rubber on lingual surface of teeth. On labial surface use a thin solution of pink rubber between the interstices of teeth. Then take small piece of pink rubber and press between the interstices of the teeth, then lay on one or two strips of dental pink rubber over the labial surface you wish to cover, finish up doing the same on labial surface with ordinary rubber. You can make a plate as artistic as you wish by this invention, perfect lines of demarcation. Or by my invention you can dissolve pink rubber in any solvent and in that condition add colored smalts and red mineral pigments, and one-twentieth of red rubber, small quantity of vermilion, which will, by adding or lessening a trifle, produce various shades. When pink is thoroughly mixed let it thicken so that you can apply it on labial surface stiff. Then press with fingers and polish with spatula. If necessary add two coats. When trimmed cut model from articulator and place in dental flask, fill flask full of mixed plaster and close flask. In five minutes place in vulcanizer. Flask not to be opened until plate is vulcanized as no work is done in Then remove and polish.

Proceed as in Case No. 1, by applying a thin coat model number two. of rubber solution over the labial and lingual surfaces, then cut to shape a piece of ordinary dental rubber and apply it on the lingual surface only and up to the alveolar ridge, then apply a strip of waxable rubber over the labial surface to connect only with the ordinary dental rubber at the alveolar ridge. Articulate teeth like in Case Model One. Place a strip of ordinary dental rubber over any waxable that may show over pins at lingual surface of teeth. Apply pink gum by either system as described in Model No. 1, and finish.

Proceed with case as in No. 2, but this process is **Model Number Chree.** for partial plates only. Coat model, then apply on lingual surface ordinary dental rubber. (Double strip any portion near the teeth that need to be thickened.) Trim to shape and



only adjust teeth to this ordinary dental rubber plate with waxable rubber. Flask, vulcanize and finish as above described.

Model on articulator, cut a piece of aluminum, model number Four. gold, or other metal plate the shape of the whole lingual surface, anneal it and with the fingers and a rounded end stick press it to the plaster model, while doing so hold it firmly in position and it will form a perfect metal plate, then puncture margins and press to shape again, then remove from model. Coat this same model with a thin solution of rubber, then apply a very thin sheet of waxable rubber to the whole lingual and labial surfaces. Trim to shape, then heat the waxable rubber and metal plate that has just been formed and press metal plate into the waxable rubber base. Articulate teeth and finish as described in Model No. 1. This waxable and metal plate can be made in ten minutes and makes a very strong thin plate.

Form metal plate as described in Model No. 4.

Model Number Five. Apply a coating of rubber solution on only the labial surface, then apply over it on labial surface a strip of thin waxable rubber. Trim metal plate just formed, heat the waxable rubber labial strip on the alveolar ridge and press the metal plate to its place on the lingual surface. This makes a metal plate both on the lingual and palatine surfaces and can be made easily in fifteen minutes. Complete plate as described in preceding models.

Model on articulator. Take two impressions, one of plaster. When removed from mouth build up the Model Number Six. labial portion also the soft palate, so that you can pour a low fusing metal (after being thoroughly dried), directly into the plaster impression. This forms a perfect die. (To make low fusing metal, take Tin 4 oz., Lead 6 oz., Metal Bismuth 8 oz. This will melt in boiling water.) Take an impression of this metal die in modeling compound and make a plaster model, dry plaster model thoroughly and place in box of molding sand and pour the above low fusing metal over it, which makes a counter die. Swage plate. Place over plate surface to prevent marring a piece of Coffer Dam rubber, puncture margins, swage again then place metal plate on model on articulator. piece of waxable rubber, heat and round it with fingers, then press it on the metal plate where the punctures are on alveolar ridge. Articulate teeth the same as No. 1. Remove surplus rubber on lingual surface that connect teeth down to teeth pins. Apply a thin solution of dental rubber over waxable rubber remaining, then heat a strip of ordinary dental rubber to completely cover the part, as it makes a perfect finish. Apply gum and finish as previously described. This makes an all single metal plate



with the exception of the attachments and gums. Vulcanize with or without model.

Form metal plate like Model No. 4, puncture it model number seven. all over. When formed remove from plaster model, coat model with a thin rubber solution, heat and apply over this a very thin sheet of waxable rubber, trim to shape required, then take lingual metal plate just formed, heat it and the waxable plate on model and press it into the waxable rubber plate. Articulate teeth as described, then apply over the whole lingual surface of metal plate a thin sheet of ordinary dental rubber. (Palatine margin of metal plate only will show.) Complete labial surface with pink rubber gum or other rubber. This makes a three-base unbreakable plate. Porcelain gum teeth can be used if required by these systems.

Proceed as in No. 6, use 28 gauge plate. Do not Model Number Eight. puncture the palatine plate, puncture the lingual one on labial and alveolar ridge. Then place both metal plates together and swage them together, remove, place between them a very, very thin sheet of waxable rubber, heat them, and when warm swage the two plates together. Trim margins, place on model on articulator, adjust teeth and gum as described, on lingual surface, finish attachments of teeth by covering waxable rubber with ordinary dental rubber, or leave it as it is and after vulcanizing trim and undercut from metal plate to teeth on lingual surface the waxable rubber, permitting enough waxable rubber to secure teeth in position, fill in with S. S. White's white alloy amalgam, and burnish or use any low fusing suitable metal. (If aluminum plate is used, thoroughly oil plate all over before applying the amalgam and leave it on until amalgam thoroughly sets, as mercury in amalgam has affinity for aluminum and would injure it if not oiled.) This makes an all metal plate but gum. There is some work on this beautiful plate, but it will please you. Bear in mind that nearly all of the work is done on all these systems while model is on articulator. Make all of your plates very thin as by this system plates are a great deal stronger. After you have made a few of these plates you can do the work very rapidly. Until you get a little practice in the work articulate a few teeth and let cold water set the material and they will stay firmly in place. In using gum teeth start the two front blocks that way. Waxable rubber will not make a perfect surface, so always cover it everywhere with dental rubber. There is no perfect rule to go by in producing pink shades. To the pink rubber solution add a little vermilion and when applying the semi-pink see that it is the consistency of paste. Red pulverized glass added, gives a variety of shade. Use



red pulverized mineral smalts. After making a few tests you can produce the shade that suits your taste.

You have perfect control of the ordinary pink rubber and would use it until you are fully suited with the semi-pink gum. You cannot but be well satisfied with these systems, for they are all one could ask and you will find your laboratory work a pleasure. Mend plates by applying a thin piece of waxable rubber over break, ordinary rubber over that, and put in two or three plates in one flask. This will make your patch work easy. Never open flask with any of my systems until vulcanized. If you should wish the especially prepared waxable rubber for these systems I supply it at \$2.00 per package.

Very respectfully, J. M. CARD.

If plate is to be tried in mouth, silex model, when hard use very thin silex, soap it and apply sparingly dissolved rubber. Put in cold water and it will separate, or use tinfoil on model with the above treatment. Make first plate without silex. In place of above use mucilage. To remove soak model in cold water.



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SOCILIAN ANNOUNCEMENTS

National Society Meetings.

National Dental Association, Atlanta, Ga., Sept. 18, 1906.

State Society Meetings.

Connecticut State Dental Association, Bridgeport, April 17-18, 1906.

Illinois State Dental Society, Springfield, May 8-11, 1906. Montana State Dental Society, February 23, 24, 1906. Ohio State Dental Society, Columbus, December 5, 6, 7, 1905. Vermont State Dental Society, Brattleboro, May 15, 1906.

Che Second District Dental Society.

The Second District Dental Society announces its Special Annual Meeting for January, 1906, on the evening of the second Monday at the Kings County Medical Building. The Essayist, Joseph William Wassall, M.D., D.D.S., of Chicago, will present a paper entitled "Gold Inlay Restoration of Bicuspids and Molars," fully illustrated. All the local societies will be in attendance, and all ethical dentists are cordially invited.

J. H. Hanning, Secretary.



District of Columbia Board of Dental Examiners.

To fill a vacancy on the Board of Detal Examiners, caused by the expiration of the term of Dr. Charles W. Appler, the Commissioners ordered the appointment of Dr. William B. Daly. Commissioner Macfarland nominated Dr. Daly and Commissioners West and Biddle approved the appointment.

Northwestern University Dental School, Alumni Association.

Alumni Association of Northwestern University Dental School will hold its annual clinic, Tuesday, January 16, 1906, at University Building, corner Lake and Dearborn streets, Chicago. All practitioners are invited to attend.

G. B. Macfarlane, D.D.S., Secretary,

70 State street, Chicago.

Fred W. Parker, D.D.S., President.

Pennsylvania State Board of Dental Examiners.

The Board of Dental Examiners of Pennsylvania will conduct examinations simultaneously in Philadelphia and Pittsburg, Dec. 12-15, 1905.

For papers and cards of admission address Dr. N. C. Schaeffer, Secretary Dental Council, Harrisburg, Penn.

Illinois State Dental Society.

At the Annual Meeting of the Illinois State Dental Society, held in Moline, Illinois, May 9, 10, 11, the following officers were elected for the ensuing year: President, S. Finley Duncan, Joliet; vice-president, L. W. Skidmore, Moline; secretary, Elgin MaWhinney, 34 Washington street, Chicago; treasurer, Chas. P. Pruyn, Chicago; librarian, J. T. Cummins, Metropolis City; Program Committee, J. P. Buckley, Chicago; Clinic Committee, W. F. Whalen, Peoria; Committee on Science and Literature, E. H. Allen, Freeport; Committee on Art and Invention, C. E. Jones, Chicago; Editor of Transactions, Edmund Noyes, Chicago Members of Executive Council for three years: C. C. Corbett, Edwardsville; M. R. Harned, Rockford; A. D. Black, Chicago. Local Committee of Arrangements: T. P. Donelan, Springfield; E. F. Hazell, Springfield; E. A. Kartack, Springfield. The next meeting will be held in Springfield, May 8, 9, 10, 11, 1906.

Elgin MaWhinney, Secretary.

967 Dec.



Che Mississippi Dental Association.

The twelfth annual meeting of the Mississippi Dental Association, held at Jackson, April 19-21, elected the following officers: President, Dr. A. B. Kelly, Yazoo City; First Vice-President, Dr. L. B. McLaren, Natchez; Second Vice-President, Dr. J. F. Scott, Summit; Secretary, Dr. E. Douglas Hood, Túpelo; Corresponding Secretary, Dr. W. H. Reaben, McComb City; Treasurer, Dr. C. C. Crowder, Kosciusko. Executive Committee—Dr. W. O. Talbot, Biloxi; Dr. C. F. Boger, Natchez; Dr. E. Douglas Hood, Tupelo, ex-officio Chairman.

The next meeting promises to be the best ever held, and preparations are now being made for a good series of papers and some interesting clinics.

The thirteenth annual meeting will be in Gulrport between June 1-15, 1906, exact date to be fixed by the Executive Committee.

E. Douglas Hood, Secretary.

Hartford Dental Society.

The Hartford Dental Society held their annual meeting October 9, and the following officers were elected: President, Dr. A. E. Cary; vice-president, Dr. E. R. Whitford; secretary, Dr. Edwin H. Munger; treasurer, Dr. A. A. Hunt; librarian, Dr. J. H. Kane; executive committee, Dr. H. E. Snow, Dr. Nelson Goodwin, Dr. C. H. Riggs.

EDWIN H. MUNGER, Secretary.

South Dakota State Board of Dental Examiners.

The next meeting of the South Dakota State Board of Dental Examiners will be held at Sioux Falls, S. D., January 16, 1906, beginning at 1.30 p. m. sharp. All applicants for examination must bring diplomas from reputable dental colleges or affidavit of having been engaged in the practice of dentistry for at least three years immediately preceding said examination. Instruments and materials necessary to do all kinds of operative and prosthetic work will be needed at this examination. Vulcanizer and lathe will be furnished by the Board. All applications must positively be in the hands of the Secretary by January 9.

G. W. Collins, Secretary, Vermillion, S. D.

1906 - Subscribe Now for the 1906 Volume - 1906

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Intenest

Magazine of Dental Art, Science and Citerature ...

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Published by Consolidated Dental Manufacturing Co. 130, 132, 134 Washington Place; 187, 189, 191 West 4th Street, New York . .

(MC 34)

Subscription, \$1.00 per year Foreign U. P. U. Countries \$1.75 per year

Entered as second class matter at the New York, N. Y., post office

Vol. XXVII.—No. 12 December 1905



R. Ottolengui, M.D.S.
Editor
80 W. 40th St.
New York

CONSOLIDATED PORCELAIN TEETH

PINS

THE PINS used in a Consolidated tooth are correctly proportioned and are so placed as to withstand the greatest amount of leverage or pressure exerted upon them. The gauge and shape are designed with the same end in view, and especially to avoid all danger of checking a tooth by any undue expansion. They are made of platinum, containing an alloy of iridium, giving the greatest tensile strength and resistance. The resistance of our wire is almost double that of pure platinum. It has a minimum breaking load of 45,830 pounds per square inch. The breaking load of pure annealed platinum is 37,970 pounds per square inch. The heads of the pins are large, and in making them. special care is taken to have a well-formed head on that end of the pin imbedded in the body of the tooth itself. They are baked into the porcelain and it is therefore impossible for the pins to pull out of the teeth.

Send for Catalog of Porcelain Teeth and Davis Crowns



Items of Interest for 1906

Che Cwenty-Eighth Volume

Every year we predict to publish, if possible, a better volume than the last, but in this our task is nothing less than doing better than the best.

Our subscribers are our judges and the large and constantly increasing subscription list shows that ITEMS OF INTEREST is furnishing what the profession requires and likes.

In the Uanguard of Progress:

Porcelain

We were the first to announce the dawn of the porcelain era. Many papers have since been published on that subject.

Orthodontia

We have always devoted much space and attention to Orthodontia. This is now becoming an exclusive specialty.

Dental Laws

One of our most valuable and popular departments is "Dental Laws and Licenses." Recently a new magazine has appeared devoted exclusively to this subject.

Gold Inlays Porcelain Inlavs

of gold inlays.

The inlay principle is attracting much attention in the highest dental circles. The porcelain inlay for conspicuous places; the gold inlay for masticating surfaces. We will publish a series of excellent fully illustrated articles by highest authorities on this new subject

Besides this the whole field of porcelain and its uses will H Great Book be covered by a series of articles which promise to rival the highest works of dentistry. The great authorities on the various classes of porcelain work will contribute to make this the most comprehensive and instructive book ever published on the subject.

The ever popular papers on Bridge-work by Dr. Hart J. Bridge-Work Goslee will be welcomed by all readers.

Two new departments will be introduced, the exact nature **New Departments** of which we prefer to keep as a surprise. Suffice it to say that one of these will be the most practical department ever introduced in dental literature. It will be to the dental magazine what the clinic is to a dental society meeting.

This is not all, but it is sufficient to show you that at the Chis is not HII price of \$1.00, ITEMS OF INTEREST is the best investment in dental literature you can make.

CONSOLIDATED DENTAL MRG. CO.

Subscribe Now for the 1906 Volume of Items of Interest

Subscription \$1.00 per year to United States, Canada, Mexico and Island Possessions. Foreign Countries, \$1.75.

If your subscription expires with the December number, order renewal from your dealer or

Consolidated Dental Mfg. Co.

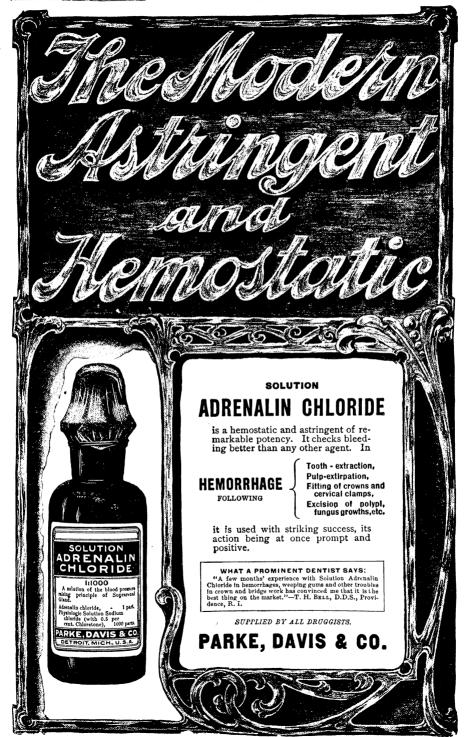
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CONSOLIDATED HIGH-FUSING PORCELAIN BODIES

Experts declare them to be "least shrinking." Beginners in porcelain work will find this feature an immense advantage,—eliminating uncertainty and insuring definite results.

Consolidated Porcelains admit of more perfect carving than do low-fusing bodies. Fewer bakes are required to complete a filling. Exact shape is retained, even though the body is slightly overfused. Manipulation is simplified. Colors are indestructible—warranted not to burn out.



Complete outfit costs \$25.00 Its value may be proved before purchase by working with a jar of Porcelain Body which costs \$1.00

Avoid unnecessary difficulties! The vagaries of low-fusing bodies are discouraging and costly. Consolidated Porcelains are not supersensitive. Success in baking them may be obtained with average skill and ordinary caution.

Write us for Booklet.

FOR SALE AT ALL LEADING DENTAL DEPOTS

CONSOLIDATED ODDENTAL MFG. CO.

NEW YORK

THAT LIVE TOOTH APPEARANCE

is a striking characteristic of the Davis Crown, just as it is in the famous Consolidated Porcelain Teeth. The Davis is the only porcelain crown which possesses that natural appearance.

The Davis Crown can be easily and accurately fitted because there is no obstacle in the way of exact grinding, such as is encountered when grinding a Crown with a baked-in pin. The detached pin is a great convenience, and with its efficiency besides, has made the Davis Crown so popular.

The pin of the Davis Crown is stronger and stiffer than platinum. Note the ample strain-bearing shoulder and the recess in the Crown to receive it. No matter what style of setting you adopt this shoulder is always the strength-giving foundation which insures permanency.

Send for Booklet Describing Methods of Setting

The DAVIS CROWN

FOR SALE AT ALL LEADING DENTAL DEPOTS

CONSOLIDATED DENTAL MFG. CO.

NEW YORK

IN
MANY FORMS
ALL
SPECIALTIES



R. S. WILLIAMS' GOLD



NOTED
FOR
EXTREME
PURITY

The R. S. Williams' Standard Gold Foil

Not Standard Not Annealed Gold Foil is the foil just as it comes from the beating and trimming, but without annealing. When annealed, after being formed into ropes, ribbons, etc., ready for use, it is remarkable for its uniformly cohesive quality. It s excellent for surfaces, contours, etc. It finishes finely and the burnisher rubs over it smoothly.

Prices:— $\frac{1}{8}$ oz., \$3.50; $\frac{1}{2}$ oz., \$14.00; 1 oz., \$27.00.

Cohesive Standard Cohesive Gold

(Nos. 2, 3, 4. 5, Foil can often be used to
6, 10, 20, 30, advantage just as it is
taken from the book
without being freshly annealed. It
will generally be sufficiently sticky for
use inside of cavities, and will be
comparatively soft working. When
necessary, annealing will make it
reliably cohesive.

Prices:— $\frac{1}{8}$ oz., \$3.50; $\frac{1}{2}$ oz., \$14.00; 1 oz., \$27.00. No. 2, 25c. per $\frac{1}{8}$ oz., extra.

Medium Standard Medium Gold (Nos. 4, 5, 6) Foil is the quality between "Cohesive" and "Soft." When freshly made, and used without annealing, this foil has a very soft feeling and yet seems cohesive under pressure. It is important to have this fresh, because it is susceptible to changes. If necessary to anneal use a very low heat, particularly if it is intended to preserve the medium quality; a high heat will make it nearly the same as cohesive foil.

Prices:— $\frac{1}{8}$ oz., \$3.50; $\frac{1}{2}$ oz., \$14.00; 1 oz., \$27.00.

Soft

(Nos. 3, 4, 5, 6)

If an operator desires to use only one kind of gold for all operations, Soft foil is the best gold for the purpose.

Standard Soft Gold Foil is so made that, when formed into ropes, ribbons, pellets, cylinders, etc., and used without annealing, it has such toughness that the plugger point will not readily pass through it, but the gold will be carried to its place. The surfaces will slide until heavy pressure is applied, and if continued some cohesion takes place. If any annealing is needed, the heat which the hand can bear will produce a change, giving a waxy quality which is highly prized by many operators. In this advertisement the word "soft" means soft under the instrument.

Prices:— $\frac{1}{8}$ oz., \$3.50; $\frac{1}{2}$ oz., \$14.00; 1 oz., \$27.00.

Crystal Surface Standard Crystal Rolled Gold) Surface Gold is (Nos. 30, 40, 60, 120) made by rolling, and is not beaten at all. After the rolling is completed, the whole surface is dissolved off with Aqua Regia. The process of dissolving leaves the surface slightly irregular, showing the crystalline structure of the gold. This peculiar surface, together with the purity of the gold, produces a remarkable cohesiveness, which has caused the Crystal Surface Gold to be the most popular rolled gold. As it is generally used either in single thicknesses or folded flat, there is no objection to annealing to a full red heat or to any point below melting. For contours, surfaces, and cases where great strength is required, this gold is recommended more highly than any other. A well-condensed surface of this gold holds a fine finish.

Prices:— $\frac{1}{8}$ oz., \$4.00; $\frac{1}{2}$ oz., \$15.00. $\frac{1}{4}$ oz., \$7.75: 1 oz., \$29.00.

FOR SALE AT ALL LEADING DENTAL DEPOTS

Consolidated Dental Manufacturing Co.,

Crystalloid Gold

The Most Practical Plastic Gold

It is Pure Gold Only, Manufactured by a Movel Process

CRYSTALLOID GOLD is Plastic Gold, between layers of Gold Foil. This combination makes the best known form of gold for filling. The Foil supplies what the Plastic Gold lacks, namely, fibre and tenacity. The Plastic Gold supplies what the Foil lacks, namely, adaptation and freedom to move before the point of the instrument.

It spreads laterally under the plugger, thus enabling the operator to more easily start fillings in shallow cavities without retaining points and to more quickly fill all cavities, especially those difficult of access. For commencing fillings, whenever practicable, put in enough gold to fully cover the bottom of the cavity, and then force it directly down without any effort to carry it sideways. If sufficient gold has been used it will wedge at once.

Whether used inside of a cavity or in building, it has a tendency to make a level surface, thus obviating care in placing each piece in exact position.

It finishes finely with good edges and smooth, hard surfaces.

There is a great saving of time in filling cavities with this gold. Some operators say they have saved one-half of the time usually required, while some have made stronger statements. It is, however, requested, that care be used to condense perfectly, as the tendency will be to pack this gold too fast, because it packs easily.

It can be used to advantage with hand pressure, especially in frail cavities, to which it is well adapted, or it can be used with the mallet, which is preferable in contours and surfaces.

Like the other R. S. Williams specialties, CRYSTALLOID GOLD is characterized by **extreme purity.**

Prices:—1/8 oz., \$4.50; ½ oz., \$17.00; 1 oz., \$34.00; 2 oz., \$66.00; 5 oz., \$160.00

FOR SALE AT ALL LEADING DENTAL DEPOTS

CONSOLIDATED DENTAL MFG. CO. NEW YORK





PERFECTION PINK RUBBER

IS USED BY THOUSANDS OF DENTISTS WHO HAVE PROVED ITS STERLING MERIT

The exquisite color of Perfection Pink Rubber is its unrivalled characteristic. No other rubber possesses such a perfect resemblance to the natural gum shade. It takes an ideal natural finish, and that glossy or dead appearance is entirely absent. It does not fade or discolor. It is very tough and strong, with necessary elasticity, and may be used for all the purposes of vulcanite rubber. Sample free.

PUT UP IN QUARTER-POUND PACKAGE

PRICE PER BOX

\$1.50

FOR SALE AT ALL LEADING DENTAL DEPOTS.

Consolidated Dental Manufacturing Company **NEW YORK**



THE IMPROVED

Spooner Quick Filling Syringe

(Patent Applied For.)



With the new style point and powerful Para bulb, this is the quickest of quick filling syringes. The point, with the exception of the patent tip, is made of hard rubber, obviating corrosion and so constructed to entirely prevent leakage. When filling, the tip permits of rapid inflow of water and in discharging, the stream is fine but forcible enough to dislodge all matter without flooding the mouth. For dental purposes this improved syringe is indestructible unless violently abused; the bulb is the only part to be eventually replaced.

Supplied with Right Angle or Straight Points

Price \$1.50

REDUCED PRICES

Rubber Plaster Bowls

Made of fine quality rubber, vulcanized soft, rendering them flexible. They will last for years. The edges can be pressed together to form a lip of desired size for pouring thin-mixed plaster. Plaster having become "set" in the bowls may be removed by squeezing the sides of the bowls. Made in three sizes:

Small, 31/4 in.	diameter,	2¼ in.	dee	p,			•		\$.40			
Medium, 4½	"	3	"		-			•	.50			
Large, 51/8	**	3¾	"			•	•		.70			
										-		7

FOR SALE AT ALL LEADING DENTAL DEPOTS

CONSOLIDATED (D) DENTAL MFG. CO.

NEW YORK



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CONSOLIDATED DENTAL MFG. CO.

AJAX RUBBER DAM WEIGHTS







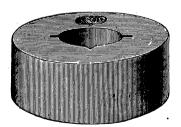
These weights are well made and finished; are neat in appearance; simple in construction and readily attached and detached; are rather thin and have beveled edges so that they hang well and are out of the way as much as possible; they are made of brass, finely polished and nickel plated.

No. 1 Small, weight 1 oz. No. 2 Medium, weight 1½ oz. No. 3 Lærge, weight 2½ oz.

PRICE: ANY SIZE, 35 CENTS EACH.

CASTING RING

UR casting ring is an implement of more than ordinary merit. It is of high quality and excellent workmanship and is easily the best of its kind. This casting ring is made of steel and not of cast iron. In this it differs from all others on the market and it requires little explanation to demonstrate the highly superior efficiency of steel over cast iron in implements for this purpose. Cast iron is apt to be full of blow-holes and more or less porous, allowing the molten metal to flow into the holes, thus making it impossible to remove the cast without injury-if at all—without remelting. The use of steel in our ring insures a smooth surface to which the molten metal will not adhere. It is nickel-plated and of sufficient weight to form a good base, but not too heavy for easy handling.



PRICE:

CASTING RING, . \$1.50
Without Fusible Metal.
FUSIBLE METAL, Per Ingot, .40
About two ingots are required to fill the ring.

FOR SALE AT ALL LEADING DENTAL DEPOTS

CONSOLIDATED DENTAL MFG. CO.

NEW YORK



CONTROL SOL

DR. OTTOLENGUI'S

ROOT REAMERS AND FACERS

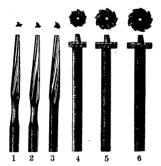
These Reamers and Facers are now made entirely by machine. This new departure has resulted in an improved and unequaled instrument. The Ottolengui Reamers and Facers have always been the approved styles and have long been famous. With the marked improvements now inaugurated, their desirable properties have been multiplied, and at the same time the new method and larger quantities produced enable us to reduce the price.

Being made by machine, the size, shape and angle of the blade is always uniform, and the cutting edges are in the exact circumference of a circle. This scientific accuracy is only obtainable in instruments cut by machine. The minute dimensions of so fine an instrument cannot be measured by the human eye, and quality as well as accuracy is sacrificed in the expense of making them by hand.

The new process permits the use of steel specially tempered to preserve the razor edges. The ease of trimming a root with these keen, smooth Facers is a relief to operators and a comfort to patients.

No. 7 fit is supplied unless other style is specified.

Catalogue **54** Number



Perhaps the most universally used of all instruments for adapting the natural root to a porcelain crown is the set invented by Dr. Ottolengui. The reamers (Nos. 1, 2, 3) have smooth ends and cut only on the sides. They are used to enlarge the canal after it is drilled to the proper depth to fit the pin of the crown. The top of the root is then readily shaped with Facers, Nos. 4, 5, 6, the guide point acting as a pivot.

Catalogue **54 A** Number (Safe-Side)



These new Root-Facers supplement the Ottolengui Facers as means for paring the labial borders of the root-end beneath the gummargin to conceal the junction of the crown with the root. Obviously the rounded side of the new Facer renders it safe from liability to wound the gum at its free margin.

PRICES REDUCED TO

Nos. 1, 2 and 3, each, \$0.50 | Nos. 6, each, \$0.60 | 4 and 5, 60 | 7, 8 and 9, 60 | 60

FOR SALE AT ALL LEADING DENTAL DEPOTS

CONSOLIDATED (D) DENTAL MFG. CO.

NEW YORK

Realization Burs

A Bur that grinds: that has to be pushed; that becomes heated in the cutting, is a terror to your patients that makes them dread the next visit to your office. Primarily, the comfort of the patient is an important feature.

The use of Realization Burs insures rapid excavating and causes little or no pain.

The steel is specially tempered to a degree that maintains the razor edges in the hardest cutting.

Realization Burs are made by machine. No others approach them in the accurate angle of the blades; the razor edges 3346 are in the exact circumference of a circle and equally distant from each other. The fine hard quality of the steel produces a sustaining cutting edge, preserved by the high temper. Such

accuracy and perfection is not feasible in the making of Burs by hand. No human eye can accurately measure the dimensions of so small an instrument and quality must necessarily suffer in the expense of such tedious operation.

The economy of using a Bur that remains sharp in the hardest cutting is appreciated by every dentist.

The shanks are perfectly true and fit accurately in the handpiece, saving much tear and wear on that instrument.

> To buy a gross of such a first class Bur as the Realization is a profitable investment, as you save \$2.00. the difference between gross price and dozen price. With an additional discount of 3% for cash with order, a total saving of about 20% is thus effected. You can't do better.



DOLLNID



PRICES

Nos. ½ to 8: 11½ to 19: 33½ to 41, per dozen, Half-Gross, 5.50 10.00 Gross.

We supply the numbers shown in cut, for Davis and No. 2 Right Angle, as well as for C. D. M. Co., Universal and No. 7 Handpieces.

We also supply No. 00 of each style. as well as those illustrated: 1/2 doz. of a size in a package.

Be sure to get the sealed package and thus avoid substitution.

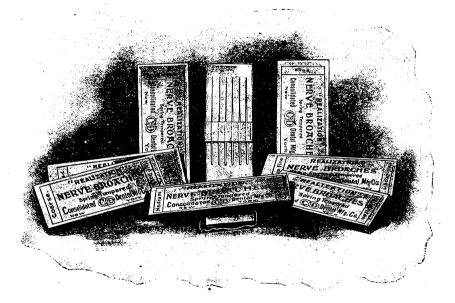


FOR SALE AT ALL LEADING DENTAL DEPOTS

(CO) DENTAL MFG. CO. CONSOLIDATED NEW YORK

Realization Broaches

Characterized by remarkable FINENESS FLEXIBILITY STRENGTH



HE alignment of the barbs is scientifically accurate. They are not mere projections standing out at all angles, but are uniform in length and are carefully inclined with the tips in a perfectly straight line. The high quality and temper of the Realization Broaches compensates for all reduction in material and also insures against breakage.

Their flexibility and toughness is a strong and rare combination.

Realization Broaches are very susceptible of manipulation in the exploration of sensitive and tortuous canals.

No root canal is tortuous enough to break the most slender Realization Broach if used with ordinary care.

FIVE SIZES:

Extra Fine, Fine, Medium, Coarse and Assorted, 1-2 Dozen in a package PRICE, \$1.00 PER DOZEN

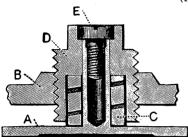
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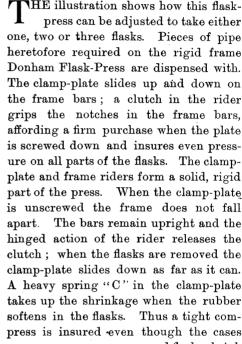
CONSOLIDATED (D) DENTAL MFG. CO.

NEW YORK

The Consolidated Donham Flask=Press

(PATENT PENDING.)





and flasks shrink to the improbable extent of one quarter of an inch. The clampplate, riders and

spring are made of tempered steel. All the other parts are of solid brass—nickel dipped. The handle can be used to

lift the press from the vulcanizer by inserting it in the hooks on the clamp-plate. This press is simple, strong, of very small bulk and unusually easy to adjust

Price complete, without Flasks, \$3.50

FOR SALE AT ALL LEADING DENTAL DEPOTS

CONSOLIDATED DENTAL MFG. CO.

NEW YORK

The Davis Improved Cross-Bar Vulcanizer.

The strongest recommendation that we can offer for this Vulcanizer is the large number that are now in successful use by dentists all over the world. Since we first placed the Vulcanizer on the market in 1897, hundreds on hundreds have been sold, and are giving universal satisfaction.

This Vulcanizer is constructed throughout on scientific and best mechanical principles. It is extremely simple, compact, durable, well-made and handsomely finished.

No wrench required. The Vulcanizer is opened by simply unscrewing the hand-wheel and lifting the handle attached to cross-bar. The two last threads effectively lift the lid from the boiler, thereby avoiding the necessity of prying them apart, which is the disadvantage of other cross-bar vulcanizers. The Vulcanizer is closed by turning down this screw, which makes a perfectly steamtight joint.

Each Vulcanizer is regularly furnished

with the Davis Improved Thermometer, a substantial Blow-off Valve and a Safety Valve. The Safety Valve contains a thin metal disk which will give way under excessive pressure of steam and thus prevent an explosion. When so ordered, our Gas Regulator,, with Timing Attachment, will be added at extra cost indicated in list of prices.

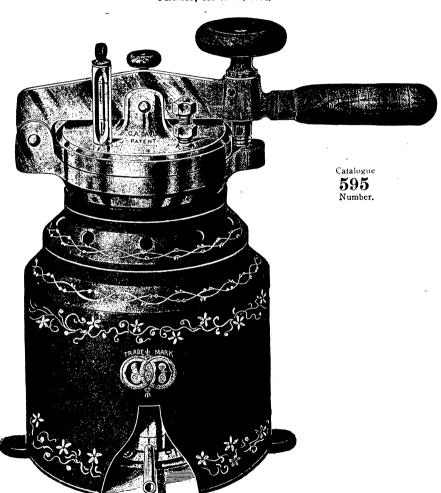
The Boiler or Pot is seamless and extra heavy. The entire lower part below the lid is made in one solid piece, thus avoiding any opportunity for a weak joint or leakage if the collar were brazed to the pot, as in other cross-bar vulcanizers. The inside diameter of the boiler is 4½ inches, sufficient to take the largest flasks, and is of sufficient depth to admit the Donham Spring.

The cross-bar is made of extremely hard gun metal and is constructed on scientific principles, being heavily reinforced at the center, where the greatest pressure is exerted. The handle of the cross-bar is hard wood, of suitable size. It is securely fastened to the cross-bar by means of a bolt and blind nut, which is countersunk within the end of the handle, making it impossible to burn the hand grasping the same. The hand-wheel screw and tapered bolts which hold the bar to the boiler and lid to the bar are of the best cast steel. The wooden hand-wheel is securely fastened to the screw and can be operated without further protection from the heat.

THE DAVIS

Improved Cross-Bar Vulcanizer.

Patented, March 20, 1894.



PRICES

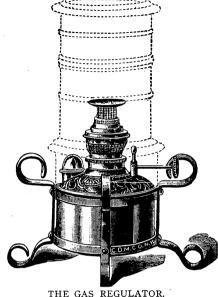
3-Case	Vulcanizer,	for Ga	s or	Kerosene		• • • • • •	• • • • •		\$20.00
2-Case	Vulcanizer,	for Ga	s or	Kerosene					18.00
3-Case	Vulcanizer,	with	Gas I	Regulator :	and Timing	Attach	ment -	. 	28.00
2-Case	Vulcanizer.	with G	as R	egulator a	nd Timing	Attachr	nent -		26.00

The Davis Improved Cross-Bar Vulcanizer.

THE

KEROSENE HEATING ARRANGEMENT

We would invite particular attention to the unique kerosene heating arrangement as furnished with this Vulcanizer. It consists of an improved kerosene lamp, constructed on the standard center-draught principle. It gives intense heat and the flame can be regulated to a nicety. The oil reservoir has an indicator showing when it is full, and empty, which is an advantage when refilling. The iron stand is light, strong and of neat form. The jacket is made of sheet iron, and has an isinglass door convenient to the burner. This kerosene arrangement is a great improvement over anything ever before furnished for vulcanizers where gas is not used.



Price, \$4.00.

We illustrate herewith the Davis Improved Cross - bar Vulcanizer fitted with our Gas Regulator and Timing Attach-The Gas Regulator checks the flow of gas so as to hold the temperature of the Vulcanizer at the degree desired. The Timing Attachment shuts off the flow of gas at the right time. If a higher or lower temperature is desired

the Regulator can be adjusted accordingly, it being adjustable to any temperature between 270° and 330°, this range comprising the temperatures applicable to dental vulcanizing. The Gas Regulator has an extra large diaphragm, rendering it extremely sensitive. The gas valve of the Timing Attachment is operated by the threaded minute arbor and is capable of very delicate regulation.

Our Gas Regulator and Timing Attachment are applicable to any vulcanizer and are furnished at the price of \$8.00.

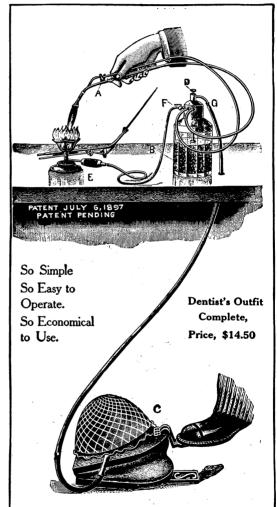
Regulator\$5.0	0
Timing Attachment 3.5	0

SAVS MPROVED COMBINATION Blow Pipe Outfit

With Glass Generator. Burns Best With No Free Oil.

absolutely Αn glass generator is provided, and it contains no free gasoline. The mixture of air is regulated by the valve on the top of the generator, and size of flame is governed accordingly. This valve serves to graduate the air supplied above the absorbent and there mixed with the vapor laden air forced through the absorbent, thereby insuring absolutely correct proportions for perfect combustion under all conditions. A power-ful flame may be maintained for a great length of time without impoverishing the fluid; this is impossible where free gasoline is present. The improved thumb valve on the blowpipe permits instant or gradual change of flame from heavy brush to the finest needle point. When set, the valve remains permanently in position and an unvarying flame is produced. This outfit is absolutely "non-blow-out." The valve will not leak gas and no gasoline can be drawn back into the Foot Bellows because there is NONE FREE, which may be demonstrated by inverting the generator. By means of a special clip the Handpiece will stand on the work bench in any desired position.

This is the original and genuine "Sam's" outfit. Beware of imitations.



Price Complete, \$14.50. W Blow Pipe, \$2.50.

Without Bellows, \$10.50. Bellows, \$4.00.

Glass Generator, only \$6.00. Case Heater, \$2.00.

SOLE AGENTS

CONSOLIDATED DENTAL MFG. COMPANY

For cutting both straight and curved lines in the stiffest plates there is nothing to equal the scientifically designed and powerful

UNIVERSAL PLATE SHEARS (Patented)

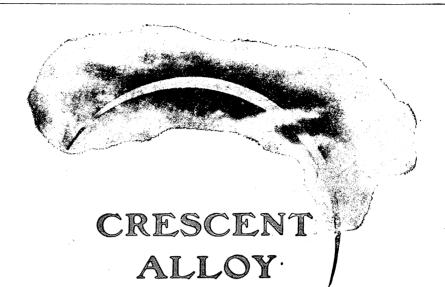
These strongly made shears are an indispensably convenient article in a Dentist's Laboratory. They do the work of two pairs. Heretofore, in cutting plate metals, curved plate shears have always been necessary to cut curved lines and straight plate shears for straight lines. Universal Plate Shears cut both curved and straight lines with equal ease and exactness, and without warping, bending or tearing the plate, even if an angle has to be re-entered. The blades are perfectly adjusted and are designed and so placed in relation to the handles that the interference, commonly encountered in using ordinary shears, is avoided. When cutting with ordinary shears, the broad side of the blades must necessarily push away the plate in order to follow the curve, resulting in the bending, tearing or breaking of



FOR SALE AT ALL LEADING DENTAL DEPOTS

CONSOLIDATED (DENTAL MFG. CO.

NEW YORK



is prepared scientifically to produce conditions most desirable in an alloy. Its ingredients are pure and its working qualities perfect. It is very strong, with ample edge strength, and its density will resist all the strain of mastication. It sets moderately, allowing sufficient opportunity for manipulation. There is absolutely no shrinkage. Its purity is absolute guard against discoloration of the teeth. The use of CRESCENT ALLOY insures a permanent filling and a guarantee of satisfactory work.

Price \$1.50 per ounce, in shavings.

FOR SALE AT ALL LEADING DENTAL DEPOTS

Consolidated Dental Mfg. Co.

CRESCENT AMALGAM CARRIER

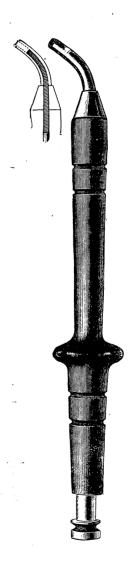
This instrument fills the demand for a first-class amalgam carrier at a moderate price.

The smaller illustration shows how easily the amalgam can be carried in the end of the tube to any part of the mouth; then by slight pressure on the shaft with the thumb the amalgam is ejected into the cavity without the waste, awkwardness or uncertainty which is encountered with other instruments.

The spring is concealed in the knob of the shaft and is not exposed to dirt, etc., and will not get out of order. The shaft is of steel with a flexible end.

The Crescent Amalgam Carrier is simple in design and strongly made with polished rosewood casing and nickel-plated metal parts.

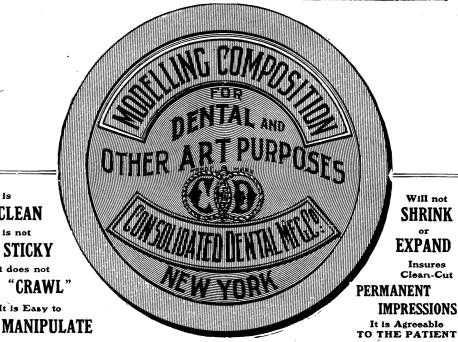
Price, \$1.00



FOR SALE AT ALL LEADING DENTAL DEPOTS

CONSOLIDATED DENTAL MFG. CO.

NEW YORK



It is

CLEAN

STICKY

It is Easy to

It does not

It is not

The No. 1, or very soft grade, is used for restoring composition that may have become hard by frequent use; the restoration being accomplished by heating in hot water.

The No. 2 is MOST UNIVERSALLY USED, being of medium flexibility, neither yielding too easily to pressure, nor too firm in resisting.

The No. 3, or hard grade, is good in warm weather.

Price per pound, 75c. By mail, 8c. extra per half pound, for postage

Impression and Investment Compound

Superior in many respects to plaster for taking Impressions, soldering Investments, and making Cast Metal Dies.

It does not adhere to the teeth, but gives an impression of the mouth, which, for evenness of surface and glossy appearance, surpasses anything that can be obtained with plaster.

Its smoothness permits spreading evenly and freely into the spaces between the teeth or fissures in the crowns, overcoming all the annoyance incident to the use of plaster.

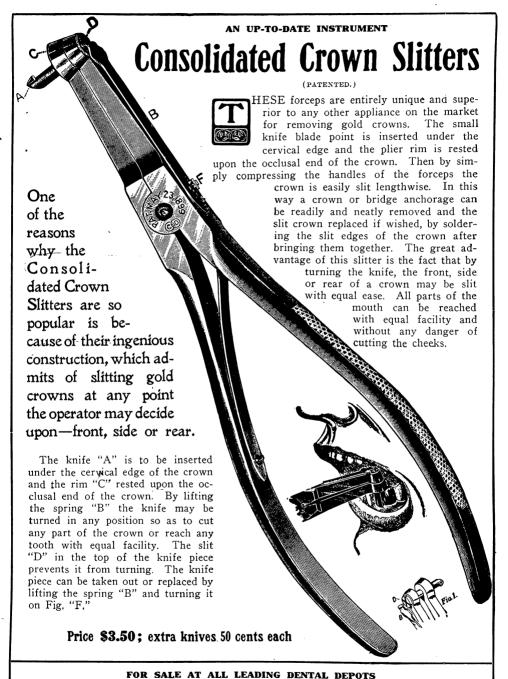
It is especially advantageous for soldering Investments and making cast metal dies.

The finished die made from this compound shows every line, tooth and undercut as sharp and distinct as the lines of an etching.

Put up in neat tin cans. Price, per can, about one quart or two pounds. 25 cents. Large size can containing ten pounds, \$1.00.

FOR SALE AT ALL LEADING DENTAL DEPOTS.

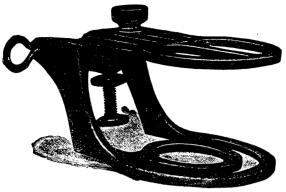
Consolidated Dental (Manufacturing Company NEW YORK



CONSOLIDATED (CONDITION DENTAL MFG. CO.

→ ADVERTISEMENTS →

PLAIN ARTICULATOR.



Catalogue No. 566.

This standard form of Articulator is accepted as one of the best all-around styles for everyday use. We have improved the pattern by the extension of the Shoulder on upper part of lower casting, which is made flush with upper casting and prevents the wobbling movement common to the old style pattern, especially when it becomes somewhat worn.

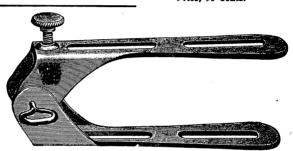
Price, 90 Cents.

CROWN ARTICULATOR.

Catalogue No. 567.

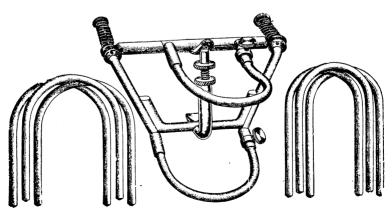
This is a very handy instrument for use in crown and bridge work. The set screw gives it the accuracy desirable in this kind of work.

Price, 25 Cents.



BONWILL'S MODIFIED COLLEGE ARTICULATOR WITH 8 LOOPS AND SCREW POST.

Catalogue No. 568.



Price \$2.00.

There's A Great Big Reason Why

you should make things comfortable for your patients. When people lose the feeling of fear in visiting your office you'll be kept busy all the time. The value of a reliable Anesthetic is reflected in a growing practice.

DESENSITOR is the advance agent of painless Dentistry. Upon its injection it desensitizes the tissues at once, efficiently and safely, with no ill effects upon the patients, allowing the operator to proceed upon the extraction of the tooth or case in hand without further attention to the obtundent.

There is no uncertainty about **DESENSI- TOR.** It never fails. It is always safe. It does not cause sloughing of the gums. Its toxic effects are nil. Its ingredients have antiseptic and restoring properties favoring the prompt healing of a wound. It is an assistant, not an obstacle, and there is no other local anesthetic with which a Dentist can work so confidently. Prices, 1 oz. \$1.00, 6 oz. \$5.00

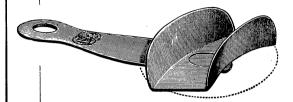
CONSOLIDATED (D) DENTAL MFG. CO.





— UNIVERSAL — IMPRESSION TRAY

The most convenient tray for taking partial impressions. The cup rotates on a pivot and can be



adjusted to any angle. Impressions can thus be taken with equal facility in any part of the mouth

In German Silver.

20 cts.

GUTTA-PERCHA-

AND WAX

For Base Plates, Bites and Impressions.

This wax contains a generous portion of pure gutta-percha, giving it the excellent quality for which it is noted. Pure gutta-percha is very expensive, but when you buy our wax you are protected against scanty proportions and adulterations.

Put up in 1/4-1b. boxes. Price, \$1.00 per 1b.; 50 cents per box.

Extra Tough Pink Paraffin and Wax.

For Trial Plates.

Many brands of Pink Wax are rendered brittle by the incorporation of coloring material. This is not true of our wax. It is, in fact, as tough as our Yellow Wax, notwithstanding its rich pink shade. Put up, same size sheets and boxes as Yellow Wax. Price, per lb., \$1.00; 50 cents a box.

Yellow Paraffin and Wax.

For Base Plates, Bites and Impressions.

Contains just the right proportions of paraffin and pure beeswax; is extremely tough and liked by all who use it. Made in sheets $5\frac{1}{3}$ in. by $2\frac{3}{4}$ in. Pat up in $\frac{1}{2}$ -16. boxes; \$1.00 per lb.; 50 cents a box.

FOR SALE AT ALL LEADING DENTAL DEPOTS

CONSOLIDATED (D) DENTAL MFG. CO.

NEW YORK

We do not advocate your first use of the



if you are averse to forming a habit. When you have once used them you will not wonder why so many dentists throughout the country say the Triggs Dental Charts are the Standard of Chart Quality.

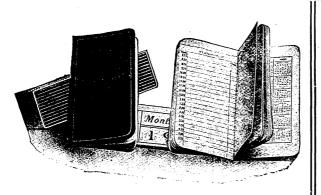
Ask your dealer for our booklet or write to

The Consolidated Dental Mfg. Co.

Home Office, 130 Washington Place, New York Branch Houses:

New York Boston Buffalo Cleveland Chicago Philadelphia Detroit
Agencies throughout the United States and Canada.

Dentists' Appointment Diaries



A LINE FOR HALF HOURLY APPOINT-MENTS EACH DAY

75 cents a Set

Neatly bound in leatherette, with name of month in gold on front cover.

A set of twelve books packed in a box. Size of book 2½ by 4¾ inches.

Neat, handy, small and fulfilling all the requirements of recording appointments.

ORDER FROM YOUR DEALER

Consolidated Dental Manufacturing Co.

Principles and Practice of Crowning Teeth

By HART J. GOSLEE, D. D. S.

Every known and useful method of constructing artificial crowns is carefully presented.

The chapter on "Metals, Alloys and Solders" as applied to Crown and Bridge-work is the most complete, concise and practical yet published.

It embraces a comprehensive chapter on "Soldering" which every dentist should read.

Two highly instructive chapters are devoted exclusively to Porcelain "Bodies" and Porcelain Work of the most modern type.

It contains 459 splendid and original illustrations.

As a text-book it has been approved by the National Association of Dental Faculties.

Bound in Cloth (300 pp.), \$3.00

Oral Pathology and Therapeutics

By ELGIN MaWHINNEY, D. D. S.

A systematic presentation of the subject from the standpoint of modern therapeutics.

The management and treatment of oral diseases is comprehensively discussed, accompanied with illustrations, plainly portraying to the reader a practical course to pursue in all operations of this kind. This book is a reliable guide for the recognition, treatment and prevention of oral diseases; all needless pathology and histological detail have been omitted, making it a scientific basis for practical therapeutics.

SOME OF THE SUBJECTS

Dental Caries,
Management of Sensitive Dentine,
Pulp Capping.
Pulp Devitalization.
Cleansing and Filling Pulp Chambers.
Suppuration of the Tooth Pulp.
The Bacteria of Pus.

Diseases of the Peridental Membrane.
Resection of Roots and Plantation of Teeth.
Diseases of the Soft Tissues of the Mouth.
Oral Manifestations of Syphilis. General considerations.
Diseases of the Maxillary Sinus.

Handsomely Illustrated. Bound in Cloth, Price, \$5.00

The Filling of Teeth with Porcelain

By WALTER WOLFGANG BRUCK, D. D. S.

Instructor in the Dental Institute of the Royal University of Breslau.

The Quickest Way to Learn Porcelain Filling Properly

It is a comprehensive elaboration of the Jenkins system and every condition presented in the application of this rapidly growing art is vividly set forth.

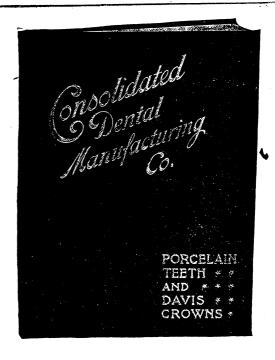
It contains 68 pages and 116 illustrations.

Handsomely bound in cloth—Price 75 cents, postpaid.



CATALOG of PORCELAIN TEETH and DAVIS CROWNS

This catalog is acknowledged by prominent tooth experts to be the most practical in the arrangement and classification of illustrations, etc., and the best published for easy selection and ordering of teeth. As it represents the highest grade of Porcelain Teeth made, every dentist should have a copy for regular use. It is strongly bound in cloth and its appearance is attractive.



COPIES WILL BE SENT POSTPAID ON REQUEST BY OUR MAIN OFFICE AND BRANCHES, OR MAY BE OBTAINED AT ALL LEADING DENTAL DEPOTS. -:- -:-

CONSOLIDATED (D) DENTAL MFG. CO.

130-132-134 Washington Place; 187-189-191 West Fourth St., New York

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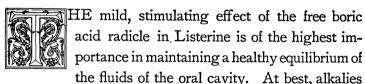
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LISTERINE

The best antiseptic for a dentist's prescription



simply temporarily neutralize the acid-forming ferments which the carbohydrates of food produce in the mouth, whilst a true antiseptic prevents that fermentative change.

Literature will be forwarded upon request, containing a brief résumé of recent bacteriological investigations supporting the above argument and embodying:

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- "Listerine Under the Microscope."—A tabulated exhibit of the action of Listerine upon inert laboratory compounds.
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Note.—Rate for advertising in this department of ITEMS OF INTEREST is ten cents per word including captions, "Wanted," "For Sale," etc., and address. Initials charged as words. Rate for agency advertisements is twenty cents per word. Advertisements should reach us by the 15th of the month to insure insertion in the following month's issue, and are payable in advance.

CONSOLIDATED DENTAL MFG. Co., Publishers, 130 Washington Place, New York, N. Y.

- 4405—FOR SALE—Established dental practice in Southern California. For particulars address Box 17, Upland, California.
- 4406—\$600 buys completely furnished office, with new No. 2 Favorite Columbia Chair, in growing town, southwestern Oregon. No other dentist. Address JOHN WELCH DENTAL DEPOT, Portland, Oregon.
- 4407—FOR SALE—Dental practice and outfit, Pennsylvania town of 3,000. 32 miles from Philadelphia. Established 14 years. Reason for selling, other business. Terms, \$400 cash. Address "GOOD OPENING," care "Items of Interest," No. 130 Washington Place, New York.
- 4408—FOR SALE—On account of poor health will sell a 16-year established practice in southwestern Missouri town of 10,000 inhabitants; furniture, fixtures and instruments. Address "H. M. M.," care "Items of Interest," No. 130 Washington Place, New York.
- 4409—FOR SALE—Jenkins' porcelain inlay outfit; used very little. Practically good as new. \$40. JAMES W. HINE, No. 103 Lancaster St., Albany, N. Y.
- 4410—Price Pyrometer, used once, a set of Brewster bodies thrown in. Address Box P., Albany, N. Y.
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- 4412—Experienced young lady understanding bookkeeping and general assistant at the chair, wants position. Address "No. 4412," care "Items of Interest," No. 130 Washington Place, New York.
- 4413—FOR SALE—Practice established twelve years; prominent street in New

- York. Will transfer successfully, having been managed by assistants. Address "C," care "Items of Interest," No. 130 Washington Place, New York.
- 4414—Experienced and reliable dentist desires good position with ethical practitioner. Registered New York and Pennsylvania. Address "No. 4414," care "Items of Interest," No. 130 Washington Place, New York.
- 4415—FOR SALE—Rare chance for good ethical dentist of means to purchase elegant corner property in suburbs of Greater New York, with guaranteed practice of \$5,000 a year. Value rapidly increasing. Address "OTHER INTERESTS," care "Items of Interest," No. 130 Washington Place, New York.
- 4416—FOR SALE—Dental office in New York State. Address "E," care "Items of Interest," No. 130 Washington Place, New York,
- 4417—FOR SALE—Cheap. Modern Wilkerson chair; instruments. DR. J. C. NORTON, Kingston, N. Y.
- 4418—FOR SALE—Practice and modern outfit on boardwalk, Atlantic City. N. R. BOTHWELL.
- 4419—WANTED—Position in Indian Territory or Arizona. Graduate 1890. Address "DENTIST," Lock Box 522, Cincinnati, Ohio.
- 4420—FOR SALE—Office at invoice, Central Ohio. Population sixteen hundred. A bargain and a good location. Box 341, Somerset, Ohio.
- 4421—FOR SALE—\$6,000 advertising office in Kentucky. Address "BUSINESS," care "Items of Interest," No. 130 Washington Place, New York.



Wants, For Sale. Etc.—Continued.

- 4422—Dentist, reliable, experienced, good address, capable of taking charge of high class practice, wishes permanent position with future in New York City. References. Address "DENTIST," care "Items of Interest," No. 130 Washington Place, New York.
- 4423—WANTED—Good rubber plate worker. State age, salary and experience. Address "No. 4423," care "Items of Interest," No. 130 Washington Place, New York.
- 4424—FOR SALE—The largest and best equipped advertising offices in Central Pennsylvania. 2 operating rooms, large reception room and laboratory. Last year's cash receipts, \$8,000. Will take prospective purchaser for one month and show him what we are doing. Address DR. TROTH, Altoona.
- 4425—WANTED—A1 operator and bridge worker. Good salary to good man. None other need apply. DR. TROTH, Altoona.
- 4426—WANTED—Capable man to take charge of \$3,000 practice on a 40 to 50 per cent. commission. Must be licensed in New York. References required. Address "No. 4426," care "Items of Interest," No. 130 Washington Place, New York.
- 4427—WANTED—Mechanical man. Good crown and bridge workman and temperate. Position permanent. Address DENTAL LABORATORY, No. 540 Main St., Cincinnati, Ohio.
- 4428—FOR SALE—Office property and most complete equipment. Built especially. Ground floor. City, 30,000, in best climate on earth. Good man can do from \$5,000 up a year by holding present practice. Will sell for property value and inventory. Best reasons. A. C. McALPIN, San Diego, California.
- twenty years. Has run from forty-five hundred to five thousand. On account of health would now sell. I can give you a start you may never get by your own efforts. Address "DESCRIPT," care "Items of Interest," No. 130 Washington Place, New York.
- 4430—FOR SALE—Fine private practice Jersey City. Established 15 years.

- Cash receipts October, \$530. No reasonable offer refused. Easy payments. Must sell this month. Owner engaged in another business Jan. 1st. Address "HUGHES," care "Items of Interest," No. 130 Washington Place, New York.
- 4431—WANTED—Position; expert gas extractor; excellent filler; porcelain worker. Two diplomas. European experience. German spoken. "ALPHA," Newport News, Va.
- 4432—TO RENT—First-class rooms for dental office. Fine location. Particulars. Address "No. 4432," care "Items of Interest," No. 130 Washington Place, New York.
- 4433—WANTED—All-round man, especially good in gold filling, crown and bridge work. Permanent position. F. O. COBB, Portland, Maine.
- 4434—Young woman having 8 years' experience as gold clerk in one of leading dental depots N. Y. City desires to make a change. Best references. Address "No. 4434," care "Items of Interest," No. 130 Washington Place, New York.
- 4435—Quick, thorough laboratory man wants position, nine (9) years' experience. Address "R," care "Items of Interest." No. 130 Washington Place, New York.

CROSELMIRE & ACKOR CO. PLATINUM

In sheets or wire for all purposes. PLATINUM SCRAP BOUGHT.

Factory and Main Office: 42 Walnut St., NEWARK, N. J. New York Office: 10 East 23d St., Room 8.

SAL HEPATICA

The original effervescing Saline Laxative and Uric Acid Solvent. A combination of the Tonic, Alterative and Laxative Salts similar to the celebrated Bitter Waters of Europe, fortified by addition of Lithium and Sodium Phosphates. stimulates liver, tones intestinal glands, purifies alimentary tract, improves digestion. assimilation and metabolism. Especially valuable in rheumatism, gout, bilious attacks, constipation. Most efficient in eliminating toxic products from intestinal tract or blood, and correcting vicious cr impaired functions.

Write for free samples.

BRISTOL-MYERS CO.,
Brooklyn, New York City.



The following claims are made for

—Dentacura.—



IRST, that it is an ideal dentifrice and as one Dentist describes it "A necessary adjunct to the Dental Toilet.

Second, that it minimizes the harmful bacteria in the oral cavity, thus producing an environment calculated in the highest degree

to preserve the teeth.

Third, that the fact that it is pleasant to use will insure this protection while a less agreeable preparation would be but infrequently used or entirely neglected.

We invite the opportunity to convince dentists of these facts. Samples and literature on application.

DENTACURA COMPANY,

NEWARK, NEW JERSEY, U.S. A.

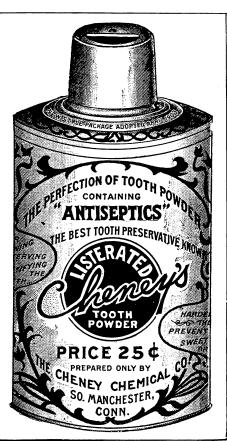
Cheney's Listerated TOOTH POWDER

has won its popularity with dentists on its own honest merits, and there is no questionable manipulation of stocks in connection with it.

Free To Dentists

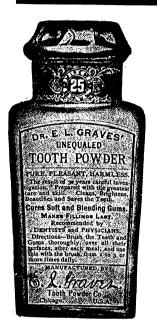
The merits of Cheney's Listerated Tooth Powder are so manifest and the advantages to the user so positive that we desire to send, gratis, a full size regular 25c. package to every dentist in America. Simply enclose your professional card and request the gratuitous package.

On Sale generally, or can be ordered by mail of the manufacturers.



CHENEY CHEMICAL COMPANY, Box 8, SOUTH MANCHESTER, CONN.

Dr. Graves' Tooth Powder



SAMPLES AND SOME ORIGINAL PACKAGES FOR EXAMINATION AND PERSONAL USE

SENT BY

EXPRESS PREPAID

WILL CURE

IS
YOUR NAME
IN THE DENTAL
DIRECTORY?

Pyorrhæa Alveolaris

in early stages, and is very effective in the treatment of all the advanced stages of the disease.

A mild tonic and stimulant; an antacid, antiseptic, deodorizer and disinfectant. A perfect mouth wash.

Will you let us send you package to-day? Write us at once for literature and samples.

Dr. Graves' Tooth Powder

contains no Acid, Soap, Potash, Charcoal, Cuttle-bone, Pumice-stone or other harsh and injurious ingredients so universally used in dental

preparations, which scratch, wear, deface, and discolor the teeth, irritate and disease the gums.

SOLD BY DRUGGISTS

- 3 oz. Glass Bottles, 25 cts.
- 3 oz. Metal Bottles, 25 cts.
- 8 oz. Metal Bottles, 50 cts.



Metal Bottle, handy for Tourists.

MANUFACTURED BY

Dr. E. L. Graves' Tooth Powder Co.



WHAT SANITOL IS

Sanitol is a true antiseptic (1 to 38 parts), highly oxidizing, neutral in reaction, and possessing, because of its ingredients, wonderful therapeutic, oxidizing and prophylactic powers. Sanitol prevents, destroys and protects from oral diseases; and is a cleanser, deodorizer, sterilizer and counteractant.



FORMULA OF SANITOL

Salitrol, Limocine, Formol, Plantago, Majorum, Menthol, Spirits of Cologne.

A combination of ingredients, scientifically compounded to meet the advanced demands of dental prophylaxis.



HIGHEST AWARD

After 8 years of test by the dental profession, Sanitol is recommended by 85 per cent of the dentists of America as the best. At the Louisiana Purchase Exposition all the Sanitol preparations received the Gold Medal, the highest award ever given.



It is a day of progress in Dentistry. No practitioner can afford to use or prescribe old preparations, compounded from antiquated formulas which met the demands of thirty years ago. Sanitol is *the Modern preparation*, tested by scientists and the profession; has met every claim made for it, and today stands Head and Shoulders in value above all others.

The Sanitol Chemical Laboratory Company, St. Louis.





63

Liquid, Powder, Paste.



Established

√ 1848.



& SOZODONT

OWING to diverse conditions and tastes, different classes of patients require different cleansing and prophylactic agents for the oral cavity. Some require a mouth wash (with or without detergent properties): others a powder (which should be free from harsh grit); while a third class need that which is fast becoming the most efficient and economical—a Paste.

The SOZODONT preparations cover the whole field. They are not only efficient but delightfully pleasant as well, thus insuring faithful use.

Information and samples cheerfully furnished.

HALL & RUCKEL, NEW YORK CITY.



We wish to announce THAT THE MADE TO MEASURE dentist coat business as formerly conducted by J. H. Terry, 260 Clark St., has been incorporated in the firm of Longenecker, Evans & Co. Mr. Terry, who has established a large clientage for his coats during the past year, will continue to have charge of this department, and with the complete equipment we have installed for this purpose, will be able to give prompt and careful attention to all orders received. It is our purpose to supply the demand for a higher grade article, and special attention will be given to material, shrinkage and workmanship. We are confident a trial order will establish our claim that (they wear longer and look better). Samples of material, catalogue and styles and self measuring blanks will be mailed free upon request.

Assuring you of careful and prompt attention to all orders.

LONGENECKER, EVANS @ CO.

A Mammoth Exhibit of Dental Manufactures.

Auditorium, Chicago, March 27, 28, 29, 30, 1906.

This will be an exhibition of manufactures, by the manufacturers, for the dentists. It will present all that is new in inventions and improvements.

You will not be asked to listen to papers or discussions but the leading manufacturers will have expert demonstrators present, who will take pleasure in showing the manipulation of each appliance and the methods of each operation. There will be a large number of these continuous demonstrations, at which you may pause when you like, as long as you like and where you may ask what questions you will.

There will be no admittance fee. You are cordially invited to make yourself perfectly at home and to look and ask and learn about what interests you. Everywhere your questions will meet with courteous and intelligent responses.

There will be no restrictions as to admission—if you are a dentist. Whether you are a member of a dozen societies or of none, we are preparing to act as your hosts and we want to see you.

Mark off the dates NOW. Resolve to be present and keep your resolve. Details as to hours of opening and closing, hotel accommodations and rates and other matters of interest will be made known in these pages later. But mark off the dates, before you forget.

March 27, 28, 29, 30, 1906.





Floss Silk News!

Have you looked into the floss silk subject carefully-both as to quality and price?

Are you getting the best quality and at the lowest price?

By best quality we mean that which is made from the best grade of raw silk that comes into this country. That which has the greatest strength combined with evenness of thread and proper waxing with plain old fashioned beeswax.

When it is necessary to use strength with it in applying a ligature it doesn't break and when you tie a knot it doesn't slip. That is the kind that Johnson & Johnson make and sell under their label bearing the Red Cross Trade Mark. The prices you may note and think over.

RED CROSS FLOSS

12 yd. waxed in individual boxes, per doz..... (1 doz. in box without individual boxes per doz. \$.90) 24 yd. waxed in individual boxes, per doz..... (1 doz. in box without individual boxes per doz. \$1.40)

BRUNSWICK FLOSS

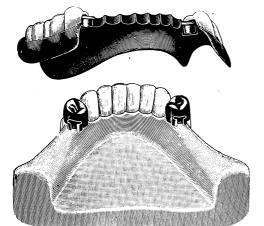
A select grade in metal boxes with cutting device 12 yd. waxed.....per doz. \$1.20 1.85 150 .90per spool

Note the price of Brunswick Floss 24 yd. spools. The best floss made put up in the best form. One dozen 24 yd. spools for \$1.85. Try one spool or a dozen spools and you will be convinced.

Sold by leading dealers in dental supplies. Ask your dealer for it. If he hasn't it write us and we will supply it.

JOHNSON & JOHNSON, New Brunswick, N. J., U. S. A.

Dear Doctor:



A lower case where posterior teeth are out. Keepers are soldered to crowns on existing posterior teeth, and the denture is made with a saddle on each side connected by gold clasp wire, or, as usually made, by extending the plate.

Do you know that the

Morgan System of Removable Bridge Work

is recognized by a large number of the Leading Dentists and Dental Colleges of this country as the best system yet offered to the profession?

Why not investigate its merits yourself? Our descriptive booklet is yours for the asking. Send for one.

Address

MORGAN Dental Specialty Co. DAVENPORT, IOWA



TYREE'S ANTISEPTIC POWDER



FREE

I WANT every dentist to test this powder at my expense. I will send a box free of charge upon request. No publicity will be given requests for samples or booklet on Dental Antisentic.

J. S. TYREE, CHEMIST, WASHINGTON, D. C. BROOKLYN, N. Y., Aug. 9, 1905.

J. S. TYREE,

WASHINGTON, D. C.

DEAR SIR:—I am using the sample of your Antiseptic Powder which you sent me and can truthfully say that it possesses all of the virtues that you set forth. As a root canal treatment in conjunction with creosote, it excels any preparation I have ever used. In surgical cases I have found it far superior to Iodoform, Aristol, etc.

In a case of empyema of the maxillary sinus which came to me recently, it has worked wonders and in many different cases which came under my care. In pyorrhoea, I use a strong solution of the Antiseptic Powder, having first scaled the roots of the teeth, then I pack small quantities of the Powder between the necks of the teeth and gums.

I might add that the results are gratifying. It is a specific in Leucorrhoea. In view of its many virtues I recommend it to my professional friends whenever the occasion presents itself.

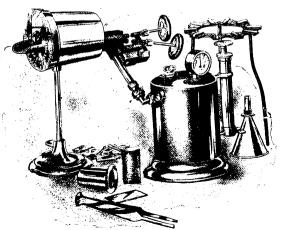
Yours very truly,

DR. J. M. WOODLE.

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BETWEEN

The TURNER GASOLINE PORCELAIN FURNACE



And any other furnace in efficiency lies in the method of producing the heat. This is of vital importance in baking perfect procelain. The Turner Furnace produces more heat than is required for baking any and all porcelains which is under perfect control of the operator day or night, and not dependent upon external source of supply, which is frequently uncertain and irregular.

3

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No. 160, complete as illustrated, \$35.00.

THE TURNER BRASS WORKS, 30 No. Franklin Street, CHICAGO





THE PELTON ELECTRIC FURNACE

COPY OF WRITTEN GUARANTEE.

Me, the Undersigned, manufacturers of the

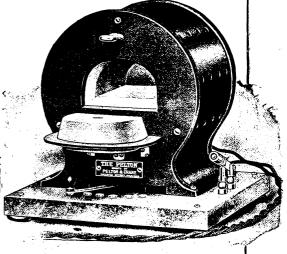
190-

Pelton Electric furnaces

do hereby agree to repair, free of charge, all injuries which may come to the Pelton furnace No._____, for a period of six months from date, providing that said injuries are brought about by use in the firing of any porcelain whitsoever. We do not insure again t fire or any injury that may be caused by any shock to the furnace, such as a fall or blow.

Pelton & Crane.





Inlay Crown and Bridge Furnace No. 1 SIZE OF MUFFLE $2\frac{q}{18}$ in. deep, I in. high, $1\frac{1}{8}$ in. wide.

 $z_{T_0}^{q}$ in. deep, I in. high, I_3^{1} in. wide. **Price \$40.00**

Continuous Gum Furnace No. 2

 $3\frac{1}{4}$ in. wide, $3\frac{1}{4}$ in. deep, 2 in. high.

Our guarantee is made on the basis of experience. Pelton muffles are very strong. If your current is any voltage between 52 and 500, direct or alternating, you can use a Pelton—Guaranteed. Everything is under one cover to 250 volts. It does not require an electrician to operate the Pelton—Guaranteed. There is nothing delicate about the Pelton—Guaranteed. It is built to use in a dental laboratory. The muffle of the Inlay Furnace No. 1 will accommodate a six-tooth bridge. Heat is always uniform for two inches, measuring from back of muffle. Guaranteed to fuse the highest fusing porcelain bodies, Muffles are large and "roomy" for the purposes intended, and do not warp, and there are no delicate parts to get out of order. Muffle wires are not exposed. Send for catalog.

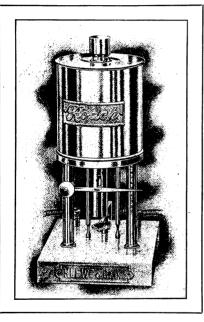
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PELTON & CRANE, DETROIT, MICH. WINDSOR, ONT.

For sale by leading dental dealers.

The Roach Automatic —Pyrometer Furnace—

AN INNOVATION IN THE CONSTRUCTION OF ELECTRIC DENTAL FURNACES



Fuses all Porcelains uniformly.

Requires no attention while in action.

Cuts off current automatically at fusing point.

Produces same shade, regardless of bulk.

Reduces materially length of operation.

Prevents under or over-baking and porosity.

Its automatic construction prevents needless burn-outs.

Watching the process of melting is absolutely unnecessary.

SEND FOR DESCRIPTIVE LITERATURE AND ASK YOUR DEALER TO DEMONSTRATE THE ROACH FURNACE TO YOU.

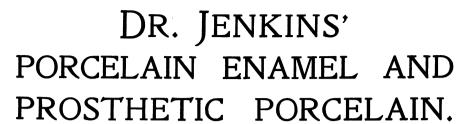
Sole Manufacturers and Agents

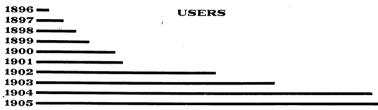
KLEWE & COMPANY,

___ Incorporated ____

Dresden, Germany

New Haven, Conn.





TO OCTOBER 1st.

This diagram, showing the steady growth of the Dr. Jenkins' Porcelains during the past decade, makes apparent, perhaps better than any other way, the great popularity these porcelains are now enjoying all over the world. If you intend taking up porcelain work of any kind, write us.

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THE JENKINS

Post-Graduate Porcelain School

Third course, November 13th to 18th, 1905.

CLINICIANS AND TEACHERS:

Dr. R. S. MILLER, Philadelphia, Pa.

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Fourth course, December 18th to 23d, 1905.

Courses are limited to twenty-five members.

Tuition fee. \$25.00. No extras.

Porcelain Inlay, Crown and Bridge work is taught.

Four days of clinics. The courses are so arranged that the busy dentist can secure the important principles of the work in the shortest possible time. Practical work is insisted upon. Apply to

KLEWE & CO., Inc., New Haven, Conn.

Brewster's Porcelains

have long held the first place in Porcelain Filling Materials.

They are made with the same care and precision that has always characterized our manufacture. The range of fusing point has been increased to fully meet the requirements of every class of porcelain work, and is now supplied ranging from 1550° Fahr. to about 2600° Fahr.

Our regular "Foundation Body" fuses at 2300° Fahr. and our "Enamel Body" at 2160° Fahr.; these are the bodies most generally in use and are the fusing points recommended by the finest operators in the country.

Our "Gold Matrix Porcelain," now fusing at 1550° Fahr., has been accepted as the standard for this class of porcelain. It retains a sharp, clean edge under fire, is very easy to manipulate, and retains its color in a remarkable manner under excessive heat, thus eliminating the difficulties hitherto attending the use of low fusing porcelain.

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- When you get through experimenting, go back to the safest known anaesthetic, NITROUS OXIDE GAS.
- You can do anything with gas that can be done with any anaesthetic, and in addition, you can safely secure

PROLONGED ANAESTHESIA, when you use the new Clark Gas Apparatus, by administering gas through the nose.

Send for new catalogue

A. C. Clark & Co.

CHICAGO

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The overflow of the Clark Double Bowl is at the top of the bowl. That is the place for it.



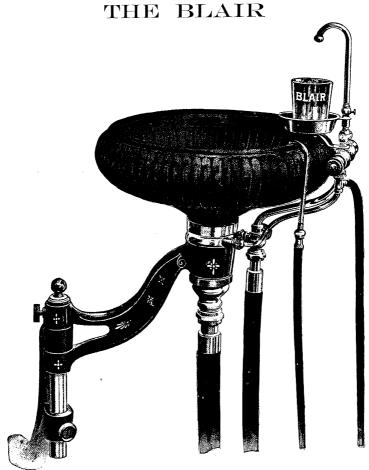
The Clark Double Bowl is the best.

It cannot be equalled without a revolving inner bowl, and we have the scalps of four concerns that infringed our patents.

A. C. Clark & Co.

CHICAGO

THERE IS ONE BETTER THAN THE REST, THIS IS IT.



Choice of Four Colors, \$40.00

RUBY, CRYSTAL, GREEN, AMBER

MANUFACTURED BY
THE BLAIR DENTAL MFG. CO.
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HETHER you fill a Root-Canal, in the main, with Gutta-Percha Points or with any other substance you must employ some agent to render and

keep that canal aseptic.

FORMA=PERCHA will do this absolutely. Dentists who have used it for ten years will tell you so.

Many of the largest discarded all other FORMA=PERCHA

It requires no mixing, and can be introduced and quickly.



Dental Colleges have preparations and use exclusively.

is always ready for use into the canal easily

It is a non-coagulant

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the entire root whether the canal be thoroughly dry or not.

It is a non-irritant.

It is indestructible, will not contract nor deteriorate in the tooth.

It will not harden and can easily be removed at any time.

It is just what you have been looking for.

Try it and be convinced.

Ask your dealer or write us direct.

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THE

WEBER DOUBLE BOWL



Nobody else ever has made as good a spittoon as the Weber Special. Nobody ever will make as good a one as the Weber Double Bowl. It has all of the good and none of the bad points of all the others.

It has taken us five years to perfect it.

It is the best looking thing ever made for dental purposes. It is also the most practical.

See it and compare with others before you buy anything else or you'll be sorry.

Advance circulars are ready.

Lee S. Smith & Son

PITTSBURG





"It didn't hurt a bit!"







'Antikamnia & Codeine Tablets''

When to Use Them

FIRST

To ease the nagging and shooting pains while operating; to quiet the nerves, and prevent the headaches and nausea which frequently follow operations, administer one Antikamnia & Codeine Taplet every hour. Give one before beginning operation

SECOND

One Antikamnia & Godeine Tablet given before and another one after extracting a tooth, will stop pain and allay irritability

THIRD

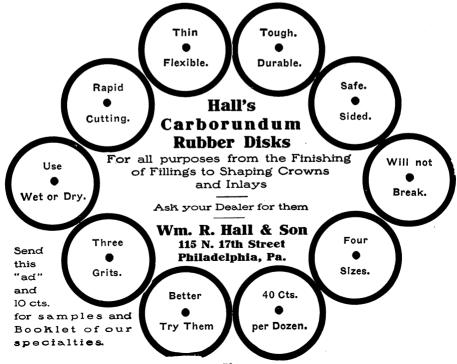
When a painful cavity exists, or a nerve or root is exposed, administer internally one or two Antikamnia & Codeine Tablets and fill the cavity with the powdered tablet, or apply it freely about the gums

FOURTH

For toothache, earache and facial neuralgia, administer one Antikamnia & Codeine Tablet every two hours until relieved

FOR SAMPLES AND LITERATURE, ADDRESS .

The Antikamnia Chemical Company & St. Louis, Mo., U. S. A







THE ONE THAT SATISFIES

Feels safe in using WAITE'S.

I like Dr. R. B. Waite's Local Anaesthetic. feel that I run no risk to my patients or my-self in using this preparation. I have great confidence in its antiseptic virtues. Dr. R. E. WARE, Shelby, N. C.

One of the many from Canada.

I can say with emphasis that Dr. R. B. Waite's Local Anaesthetic is the best after 25 years' practice, during which time I have tested about everything on the market.
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Indespensable as Gold.

I have been using Dr. R. B. Waite's Local Anaesthetic for years and have yet to meet with the patient who finds fault. It is as indispensable as gold in my practice.

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Gums Heal Like Magic.

I can honestly say, "Dr. R. B. Waite's" is the only perfect Anaesthetic of all that I have ever used. Not a single case of sloughing or toxic effect whatever. I have extracted over fifteen teeth for different ladies at one sitting and their gums healed like magic. I feel I could not prestice without it. practice without it.
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The Antidolar Mfg. Company Springfield, Erie Co., N. Y.

Pulp Spot

saves filling root canals. Use pressure anaesthesia to extirpate the tissue from the Pulp Chamber only! Let the canals alone!

Then Crush a Pulp Spot Tablet

into said chamber and fill at same sitting. There'll be no trouble; no abscess. Canal nerves will become desiccated; sterilized. The apical foramen will be sealed tight. Germ proof to all bacteria.

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has cases of Abscess, blind or chronic. Fistula. Crowns and Dams to be applied without pain. Extirpation of Pulps. Gingivitis. Hyper Sensitive Dentine. Pain or Hæmorrhages after Extraction. Periodontitis. Pyorrhæa. Pulpitis, and torture from exposed pulps.

For 16 years Anæcologen has shown and will prove its Superior Curative action for the above condition over any other combined remedies whatsoever! at a vastly less expense. Pulp Spot, \$1.50: Anæcologen \$2.00. At all Depots, or will be sent by mail on receipt of Money Order. Sold under a guarantee. After using one third of either, and not satisfied at end of 30 days, your dealer will refund their cost upon their return. Under this guarantee don't ask for samples.

> W. Irving Thayer, M. D., D. D. S. and Son. Williamsburgh, Massachusetts, U. S. A.

Have YOU tried GRANITOL

the root filling that succeeds where others fail? If not, send for your sample at once
THE ABERCROMBY CHEMICAL WORKS,

Ivory's Rubber-Dam Punch



Design Patented May 31, 1898. Price. \$3.00

Special Molar Clamps





Nos. 22A and 23A, right and left, are adapted for first superior molars and large size second superior molars and third inferior molars.

Price, per pair, \$1.60





Nos. 12 and 13 are designed for buccal cavities, those peculiar saucer-shaped cavities in first and second inferior molars; used with Rubber, Holding the Gum and Rubber Dam; well out of the way of operation.

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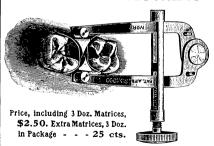
Cotton Roll Clamps



Bicuspid

Price, for either Molar or Bicuspid \$1.00

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LEWIS VULCANIZERS

are provided with proper safeguards against explosion—but—there is always a possibility of these being tampered with or neglected. In that case strength of parts of

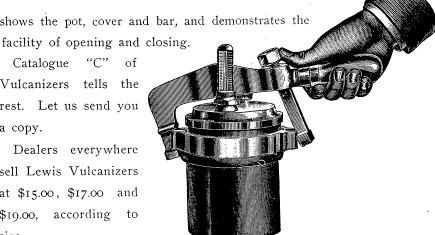
a Vulcanizer comes into play. The Lewis pot is of extra heavy seamless drawn copper, and the Cap and Bar of Forged Steel; practically unbreakable. There's a wide margin of safety beyond any possible point which the pressure can reach under ordinary conditions, and there's no reason why a Lewis Vulcanizer should ever give out from overpressure. We have never known a forged steel Cap or Bar to break, and there are many thousands of them in daily use.

THE CUT

shows the pot, cover and bar, and demonstrates the

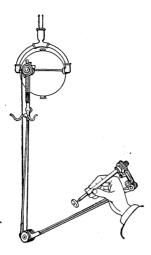
Catalogue Vulcanizers tells the rest. Let us send you a copy.

Dealers everywhere sell Lewis Vulcanizers at \$15.00, \$17.00 and \$19.00, according to size.



BUFFALO DENTAL MANUFACTURING CO.

BUFFALO, N. Y., U. S. A.



Handpiece Balance

The handpiece of a Columbia Cord Suspended Type All Cord Electric Engine is so perfectly balanced that when the engine is running full speed it may be held on the tips of the fingers and rest without pull or twist. This absence of tension is due in part to the way it is suspended and the arrangement of the belt, which is just enough better than all others to succeed where they fail, and partly to that mechanical accuracy of the various parts which distinguishes Columbia equipment.

This absence of pull or twist is highly important to the dentist, since it avoids an opposing muscular tension which would mar fine operating and quickly induce fatigue. No other all-cord electric dental engines are so free from it as the Columbia Cord Suspended Type.

These engines are fully described and illustrated in a new catalogue we have recently issued. You owe it to yourself to become familiar with the advances these engines mark, before buying. Catalogue free, on request. Columbia Electric Engines were awarded the Gold Medal at the Louisiana Purchase Exposition, 1904, after a careful investigation by experts.

The Ritter Dental Mfg. Co.

C832



Favorite Columbia Dental Chairs

Pump Easily

The raising lever is long and is so arranged that every pound of foot pressure exerts many pounds of lifting force on the chair.

If you expect to pump a chair daily for years, it is worth while to make sure it will pump easily.

If you will drop us a line, we will send you, free, a beautiful catalog, fully illustrated, which shows in detail, all the good points for which COLUMBIA chairs are famous.

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The Ritter Dental Mfg. Co.

ROCHESTER, NEW YORK, U. S. A.

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Does Experience Count?

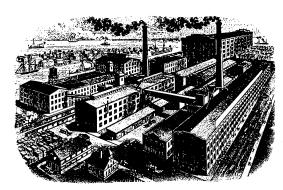
We have had twenty-five years' experience in making fine furniture, and have given the needs of the dental profession in this line careful study.

We not only claim to surpass others in the construction, workmanship and finish of our goods, but also in the convenience of their arrangement.

¶ You, Doctor, are the final judge on these points, and we feel certain of your decision in our favor, if you will but give our line careful consideration before placing your orders.

We guarantee to please you, and if we cannot do this we do not want your money.

Our goods will be shipped with the understanding that they may be returned * * *



We paying freight charges both ways if not found satisfactory > > >

¶ So far as our facilities go, there is no wood-working plant in America superior to ours. It has been built up from a one-man affair to its present proportions, because the furniture we have put out in our experience of a quarter of a century has had the reputation of being the best of its kind.

¶ One of the most important things to consider in the manufacture of high-grade furniture is the seasoning of the lumber. We carry about 4,000,000 feet ahead of our immediate requirements, which insures you against the endless bother caused by improperly seasoned material.

¶ All prominent dealers throughout the world handle our line, and we would be very glad to give you the names of those nearest you.

If you do not have our catalog, let us mail you a copy. It shows the largest assortment of Dental Cabinets, Benches, Bracket Tables, etc., put out by any manufacturer. Ask for it now.

THE AMERICAN CABINET CO., Two Rivers, Wis.





No More "Hide and Seek."

Time is money in Dentistry.

The continual opening and closing of drawers to find necessary articles, while you are working over a nervous patient, is annoying and a waste of time. It is "Hide and Seek," with one drawer opened, hiding the contents of those below, etc.

¶ You need put up with it no longer.

The Swinging Section of Cabinet No 57 saves time and makes it easy to find what you want.

It eliminates entirely the opening and closing of drawers or the moving about of trays, and substitutes a place where everything that you are using often and are apt to need quickly is in plain sight and easy reach.

You have only to open the doors with mirror panels, as shown in illustration, to have this convenient lay-out before you.

The instrument trays lie loose upon the shelves. The burr-block on the top of the right-hand Swinging Section can be pulled out nearly its entire length, placing your burrs within easy reach, without being in the way. The Medicine Closet is found by pushing aside a rolling door. The forceps are kept in long drawer beneath swinging sections.

¶ For detailed description of this and many other designs, see our catalog. Any first-class dealer will furnish you one for the asking.

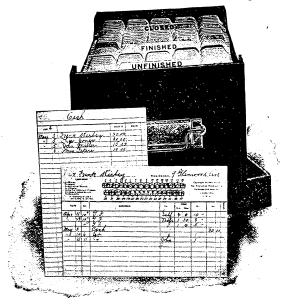


THE AMERICAN CABINET CO., Two Rivers, Wis.





THE BANNISTER Dental Card System



The BANNISTER Registering Cut of Teeth is acknowledged to be superior to any other design. The teeth are engraved in two straight lines horizontally arranged and are prominently numbered from 1 to 32. The surfaces are represented by less prominent numerals. For many years the Bannister Register has been the most popular one on the market, and this system employs the same cut.

The Bannister Card Index Outfit consists of three Guide Cards of three distinct colors, one printed "Unfinished," one "Finished," and one "Closed;" three sets of 40-division Guide cards of colors corresponding to the Guide cards, 15 Cash or Bill cards, 300 White Record cards, and a containing box with an adjustable follower.

The system is simplicity itself. A new account is opened by writing the patient's name and address in the place for them, registering the work done, and if more work is to be done at a future time, placing the record card in its proper place in the alphabet index back of the Guide card marked "Unfinished." When work is all completed but not paid for, the card is transferred to the "Finished" alphabet index, and when paid for, to the "Closed" Index.

The Cash or Bill cards are for keeping records of cash received and of the bills sent to patients.

Sample Card and Full Description Sent on Application.

Sample Card and Full Description Sent on Application.

PRICES

The Bannister Dental Card with Record Cards ruled	Sys	tem side	(No. e onl	. 1), y	С оп	nplete '	\$4.00
The Bannister Dental Card	Sva	tem	(No.	2).	Con	nplete	·,
with Record Cards ruled	bot	h sic	lès	• ′′			4.50
Record Cards, per 100						•.	.75
Alphabet Cards, per set							.40
Guide Cards, per set of three	•						.15
Cash and Bill Cards, per se	t of	fifte	en		•	•	.15

FOR SALE BY PROMINENT DENTAL DEALERS

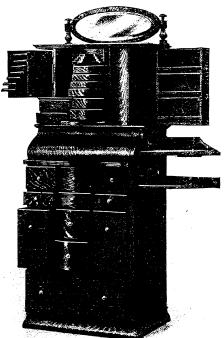
THE RANSOM & RANDOLPH COMPANY, Toledo, Ohio





A STRING OF "HAPPY THOUGHTS"

If you are looking for a thoroughly practical dental cabinet you should examine this one. There are higher priced cabinets than this—some larger, and some more elaborate, but none more convenient, and none that have greater capacity. Here is a really useful cabinet. Every inch of space in it is used for some practical purpose. You can't name a thing required in operating for which there is not a place made in this cabinet to fit it—if it should be put into a cabinet at all—and each article is located just where it should be. The arrangement is logical. In this cabinet there is a little work-bench for fitting crowns, with a gold catcher attached. This one feature will pay for the cabinet sooner than you think. There are forty-two other splendid, original features in this cabinet—each one a "happy thought." Send for our catalogue "Modern Office Furnishings," and learn more about it. If you want your money's worth of cabinet you surely get it when you buy this. It is strictly high-grade in material, construction and finish.



DENTAL CABINET, No. 35 Strictly First Class

PRICES:

Mahogany with top ornament, - \$105.00

Oak, finished Golden, Antwerp, Weathered or Flemish, with top ornament,

90,00

MADE BY

The Ransom & Randolph Co.

TOLEDO, OHIO, U.S.A.

TENAX for taking impressions of the mouth does not expand or contract.

TENAX for investing gold crowns, bridges, etc., does not crack or warp under intense heat.

Tenax Dental Compound Company

New York, Hamburg, Terre Haute

TENAX is a staple sold only by Dental Jobbers.

SHIPPING OFFICES:

TERRE HAUTE, INDIANA, U. S. .A.

November 1st, 1905.

Dear Doctor:

Fifty cents worth of TENAX will save you \$5 worth of time and a five-pound box of TENAX at \$2.00 will not only save you \$25 worth of time but insure perfect impression and investment.

You are a professional man and appreciate perfection. You not only wish to save time and secure exact results, but also wish to please your patients. TENAX doesn't run down the throat; it makes an exact impression, cuts and shaves easily, sets quick and doesn't stick to the teeth. For investment, TENAX dries at once, is absolutely true and sharp, doesn't check porcelain, and *cannot* crack, contract or expand. You are a busy dentist, and your patients are busy people. TENAX is invaluable to you.

We do not ask you to buy it. Call at the dental depots for it, ask any dental salesman for it, or write to them or to us for free samples.

The leading jobbers will tell you that TENAX is perfect. TENAX is a staple, and will not spoil nor waste. One pound of TENAX makes many pounds of impression and investment, simply mixed with plaster of paris and water.

Save money and your patient's patience.

Yours very truly,

TENAX DENTAL COMPOUND COMPANY.



How to Treat Acute Alveolar Abscess

The first requisite is access and evacuation of the pus if any be present. This should be accomplished without undue enlarging of the apical foramen or forcing any septic matter through.

Get canal as clean as possible with hot water and Dioxogen. Flood canal with Oxpara fluid and leave a little wisp of cotton soaked in Oxpara fluid in canal. Seal tooth very lightly to permit escape of gas. Give patient one grain of Calcium Sulphite per hour during continuance of pain. Two or three days later ream canal and remove all infected dentine. Mix Oxpara fluid and powder to consistency of cream and pump canal full with a broach. Seal-tooth with temporary stopping.

At third treatment drive Oxpara mixture up with pressure and unvulcanized rubber, and insert a point. This makes an ideal treatment and permanent root filling. Any filling requiring malleting should be deferred three or four days, since the circulatory acceleration which is essential to curing the abscess will necessarily render the tooth abnormally sensitive to pressure.

Oxpara Cures Abscesses.

If you are afraid to try Oxpara, write us for a booklet "Putrescent Pulps and their Treatment," a compilation of valuable contributions to dental magazines on methods of using Oxpara. You'll get a sample too.

The Ransom and Randolph Co., Proud Agent, Toledo. Ohio.

C. 10



Every Dentist is familiar

with what is termed "THE BLACK DITCH," which so frequently surrounds amalgam fillings. Its cause is a shrinkage of the amalgam, and the more plastic amalgams shrink the worst.

Many of such fillings fall out, while those which remain are held by the peculiar contour of the cavity or the depth of undercut.

But the "black ditch" is to the health of a tooth what an open sewer is to the health of those who live beside it. The dark appearance is due to decomposed tooth substance and minute food particles.

It becomes the nesting place of germs, which may assist in tooth destruction or help to break down the patient's general health. The "black ditch" is happily designated, suggesting the "Black Hole" of Calcutta.

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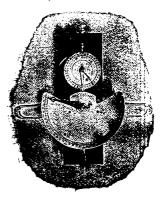
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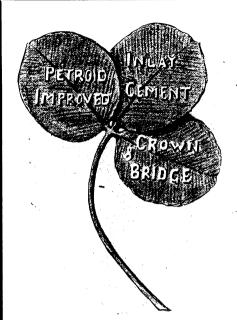
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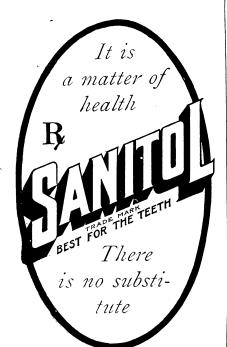
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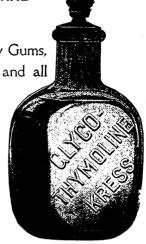
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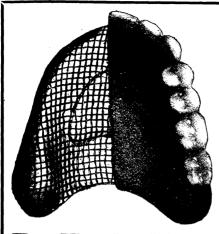
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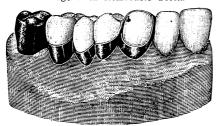
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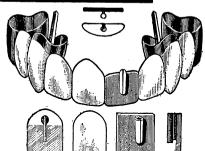
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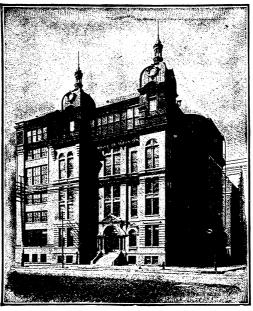
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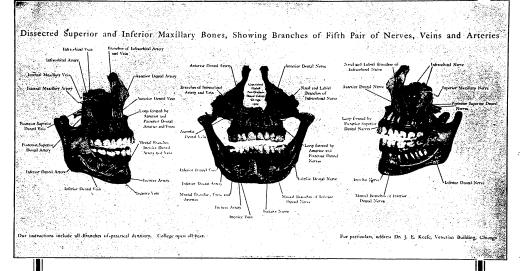
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